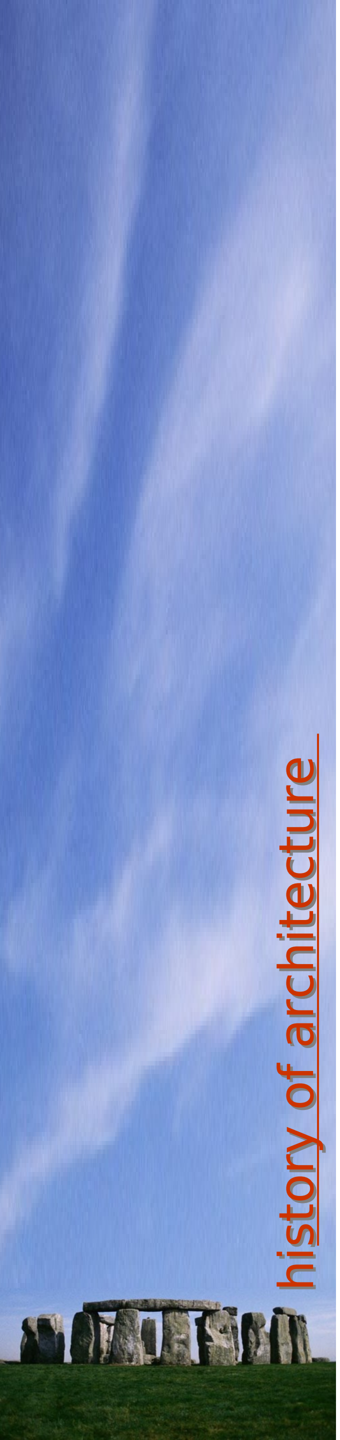
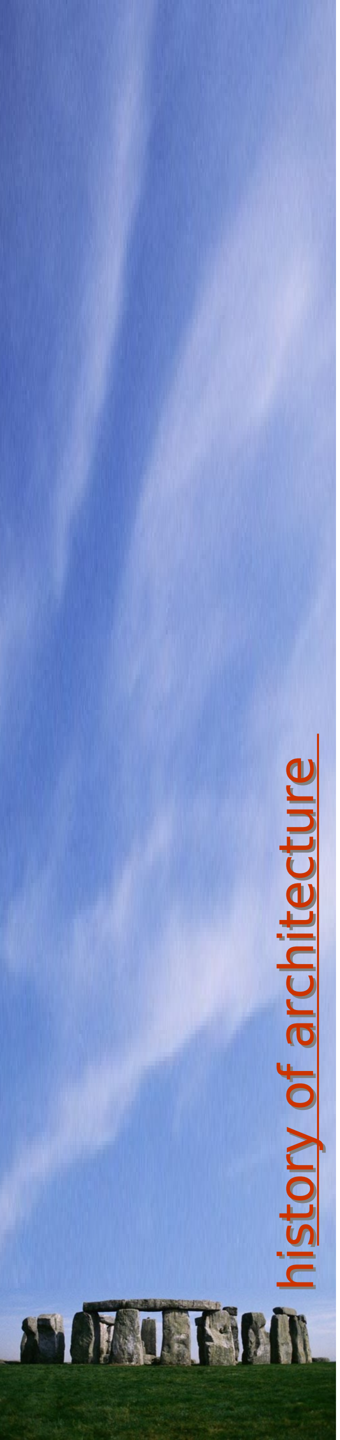

history of architecture

History of Architecture

Arch. Kevin Espina



Introduction

HISTORY OF ARCHITECTURE

What are the board exams like?

1. Memorization is necessary – you must remember many facts

2. Wide in Scope – from pre-historic to modern styles

3. Repetitive – questions from previous exams are reused

4. History amounts to only around 10% of your total score

OUR METHOD OF STUDYING HISTORY:

To try not to memorize… but to understand

History is not a list of facts… it is a story that can be retold over and over

REFERENCES

1. Ching, Francis D.K., A Visual Dictionary of Architecture

2. Fletcher, Bannister, A History of Architecture 20th Ed.

3. Mercado, Jose L., The Architectural Reviewer Volume III: History & Theory of Architecture

4. Salvan, George S., Architectural Character & the History of Architecture

5. The Children’s Atlas of World History

6. The World Atlas of Architecture

DEFINITIONS

History of Architecture
- "It is a record of man's effort to build beautifully. It traces the origin, growth and decline of architectural styles which have prevailed lands and ages."

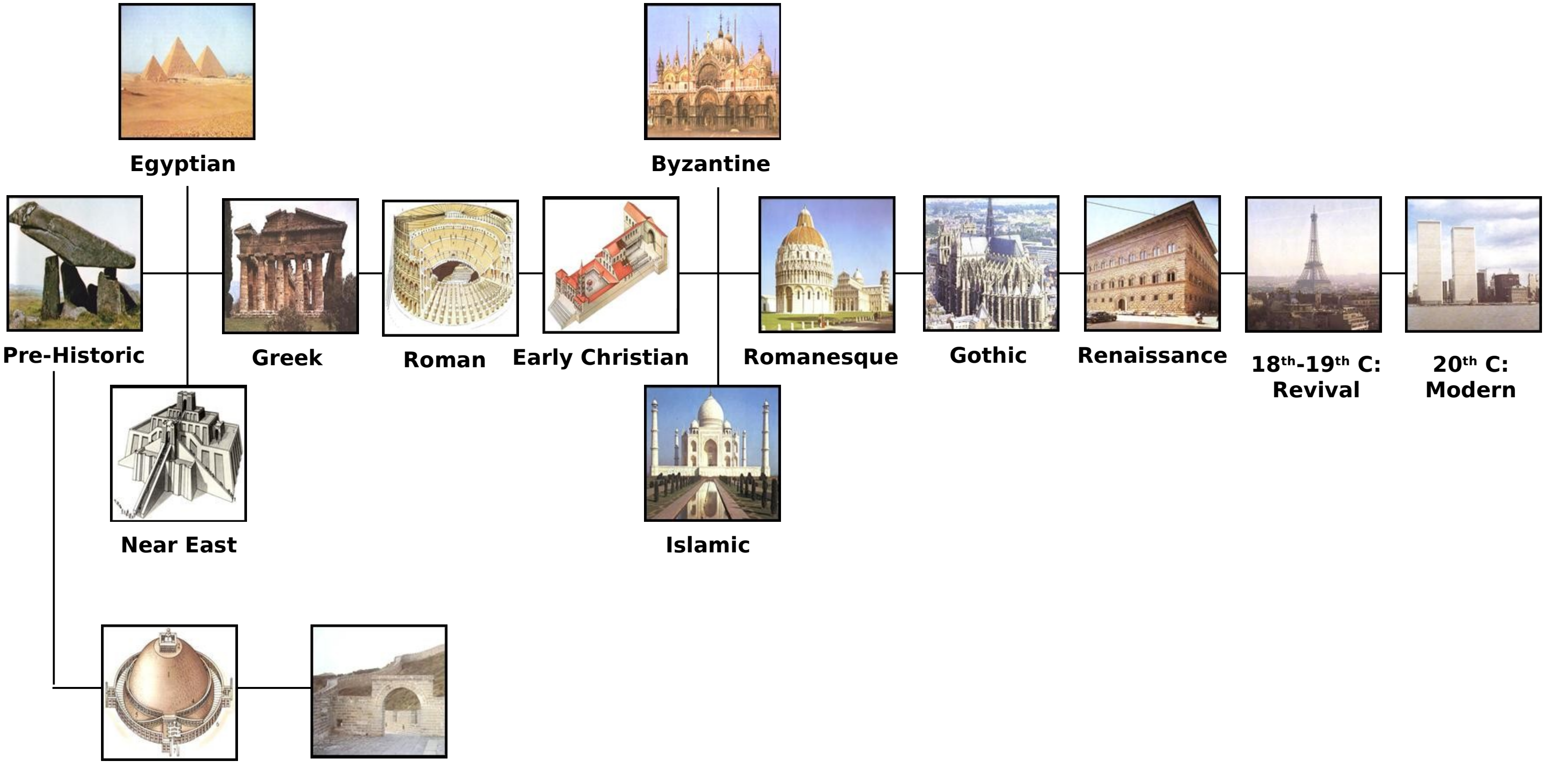
Historic Styles of Architecture
- "The particular method, the characteristics, manner of design which prevails at a certain place and time.“

Six Influences of Architecture
- Geographical
- Geological
- Climatic
- Religious
- Social
- Historical

Four Great Constructive Principles
1. Post & Lintel Construction
2. Arch & Vault Construction

Introduction

The Historical Timeline of Architecture



Egyptian

Byzantine

Pre-Historic

Greek

Roman

Early Christian

Romanesque

Gothic

Renaissance

18th-19th C: Revival

20th C: Modern

Near East

Islamic

Indian

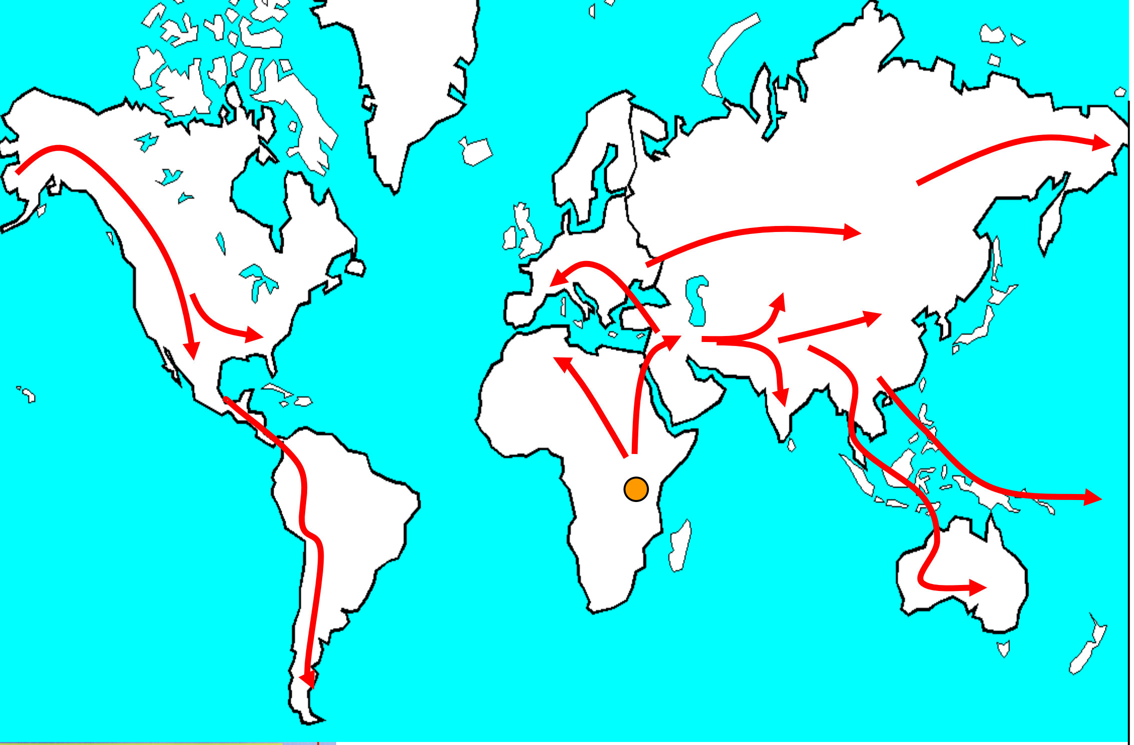
Chinese & Japanese

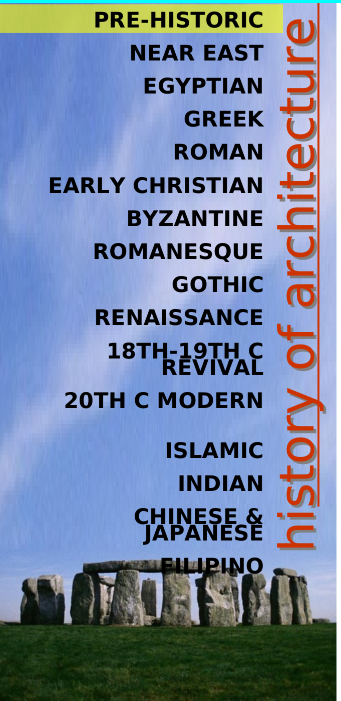
Pre-historic

The Historical
Timeline of Architecture

Pre-Historic

Pre-historic




PRE-HISTORIC
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18TH-19TH C REVIVAL
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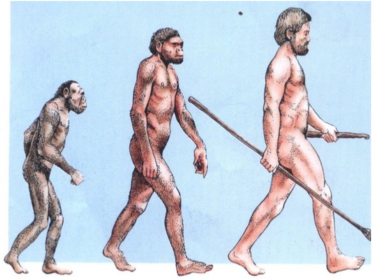
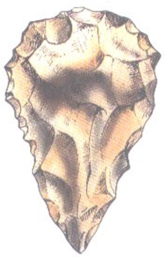
history of architecture

INFLUENCES

HISTORY

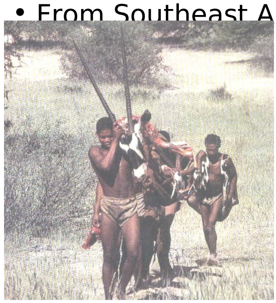
- Direct human ancestors evolved in Africa from 2.3 million years ago - *Homo habilis, Homo erectus, homo sapiens, homo sapiens sapiens*

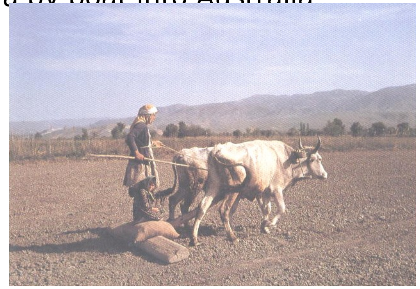




- The success of the human race was largely due to the development of tools – made of stone, wood, bone

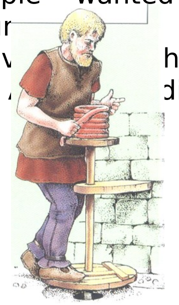
- Humans spread from Africa into Southern Europe, Asia
- Could not settle far north due to the cold climate
- From Siberia by foot into North America
- From Southeast Asia by boat into Australia

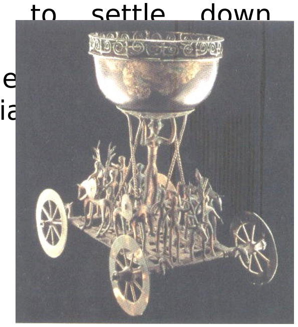




- Before 9000 BC, nomadic life of hunting & food gathering
- By 9000 BC, farming and agriculture was practiced
- Fertile soil and plentiful food
- Animal domestication for work, milk, wool

- People wanted to settle down live in commur
- First v he America, Central dia





- Some people needed not farm, so they spent time on other work - pot-making, metal-working, art and… architecture!

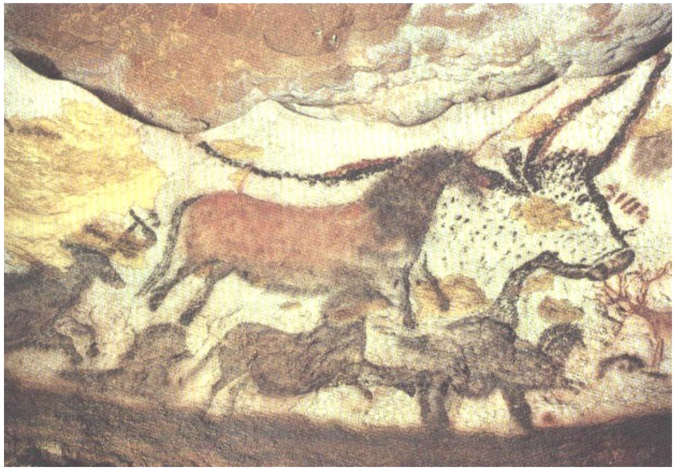
RELIGION

Pre-historic

ARCHITECTURAL CHARACTER

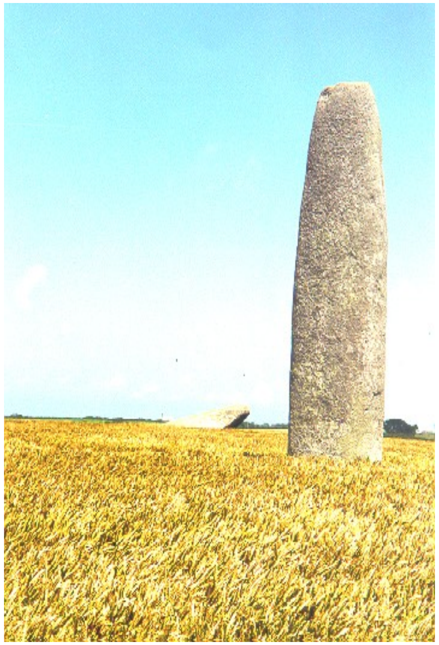
MATERIALS
- Animal skins, wooden frames, animal bones

CONSTRUCTION SYSTEM
- Existing or excavated caves
- Megalithic, most evident in France, England and Ireland

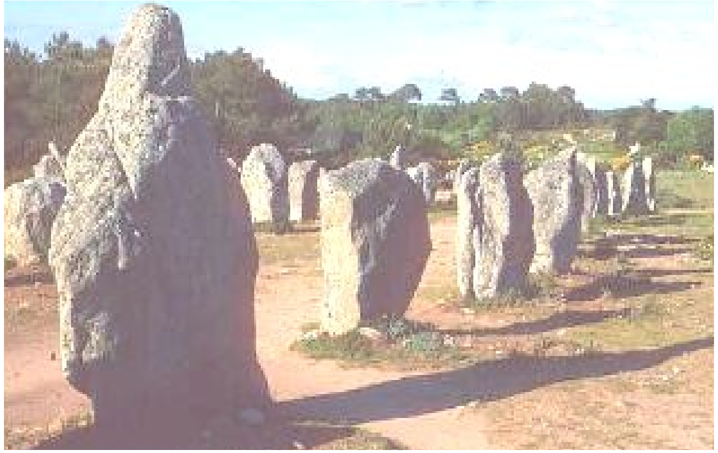


DECORATION
- Caves paintings in Africa, France and Spain
- Sculpture

EXAMPLES



MENHIR
- A single, large upright monolith
- Serves a religious purpose
- Sometimes arranged in parallel rows, reaching several miles and consisting of thousands of stones



Carnac, France

history of architecture
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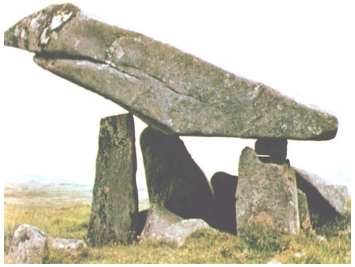
Pre-historic

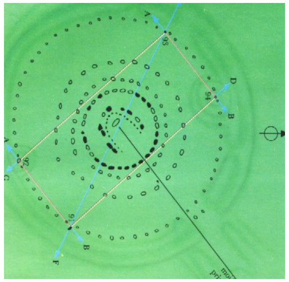
DOLMEN

- Tomb of standing stones usually capped with a large horizontal slab



CROMLECH

- Enclosure formed by huge stones planted on the ground in circular form



Stonehenge, England (2800 – 1500 BC)

- Most spectacular and imposing of monolithic monuments
- Outer ring, inner ring, innermost horseshoe-shaped ring with open end facing east

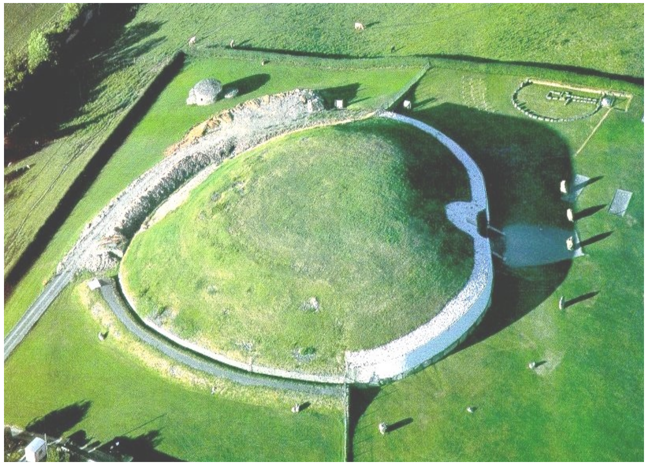
- Largest stones weigh 45 to 50 tons, came from Wales 200 km away
- Stones transported by sea or river then hauled on land with sledges and rollers by hundreds of people, raised upright into pits, capped with lintels

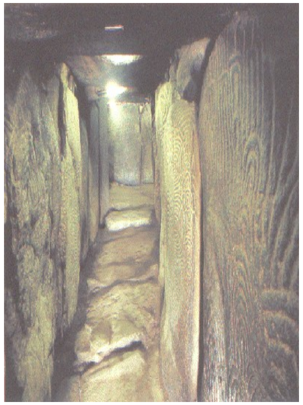
Genuine architecture - it defines exterior space

- A solar observatory - designed to mark the sun's path during sunrise on Midsummer Day

TUMULUS or PASSAGE GRAVE

- Dominant tomb type
- Corridor inside leading to an underground chamber



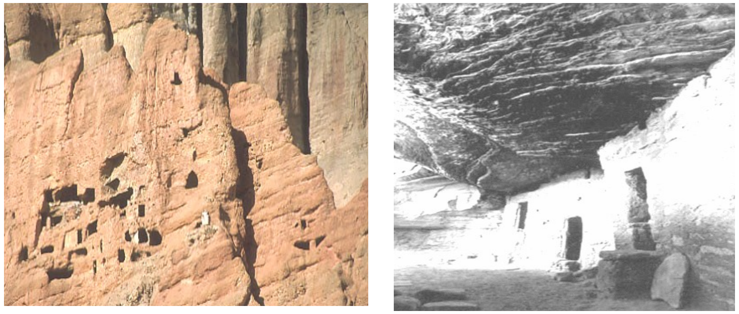


Pre-historic

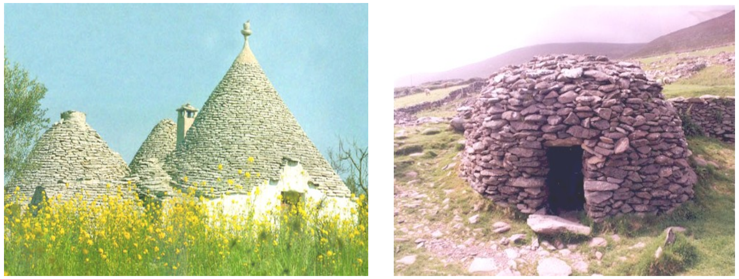
PRIMITIVE DWELLINGS

- Mostly had one room
- The development of more complex civilizations led to division of the room into smaller ones for eating, sleeping, socializing

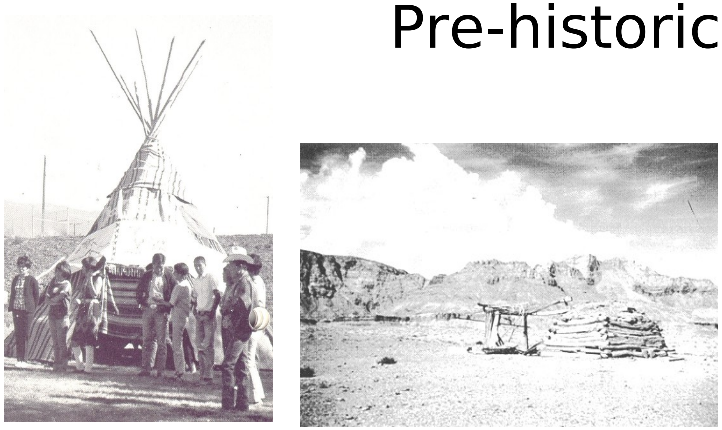
- In places where no industrial revolution has occurred to transform building methods and increase population density, houses show little difference from primitive ones



Natural or Artificial Caves

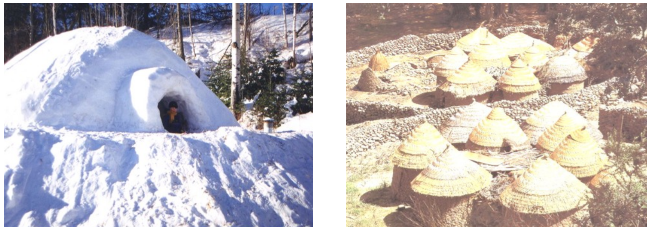


Beehive Hut
Trullo - dry walled rough stone shelter with corbelled roof

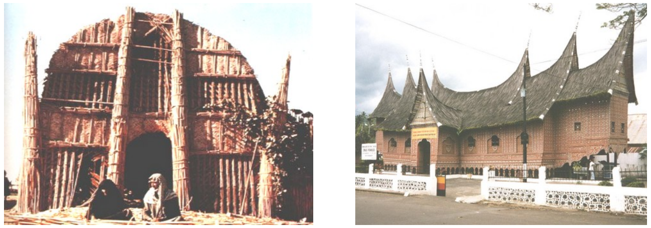


Wigwam or Tepee
- conical tent with wooden poles as framework
- Covered with rush mats and an animal skin door

Hogan - primitive Indian structure of joined logs



Igloo - Innuit (Eskimo) house constructed of hard-packed snow blocks built up spirally
Nigerian hut - with mud walls and roof of palm leaves

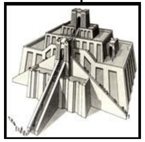


Iraqi mudhif - covered with split reed mats, built on a reed platform to prevent settlement
Sumatran house - for several families, built of timber and palm leaves, the fenced pen underneath is for livestock

Near East

The Historical Timeline of Architecture

Pre-Historic



Near East

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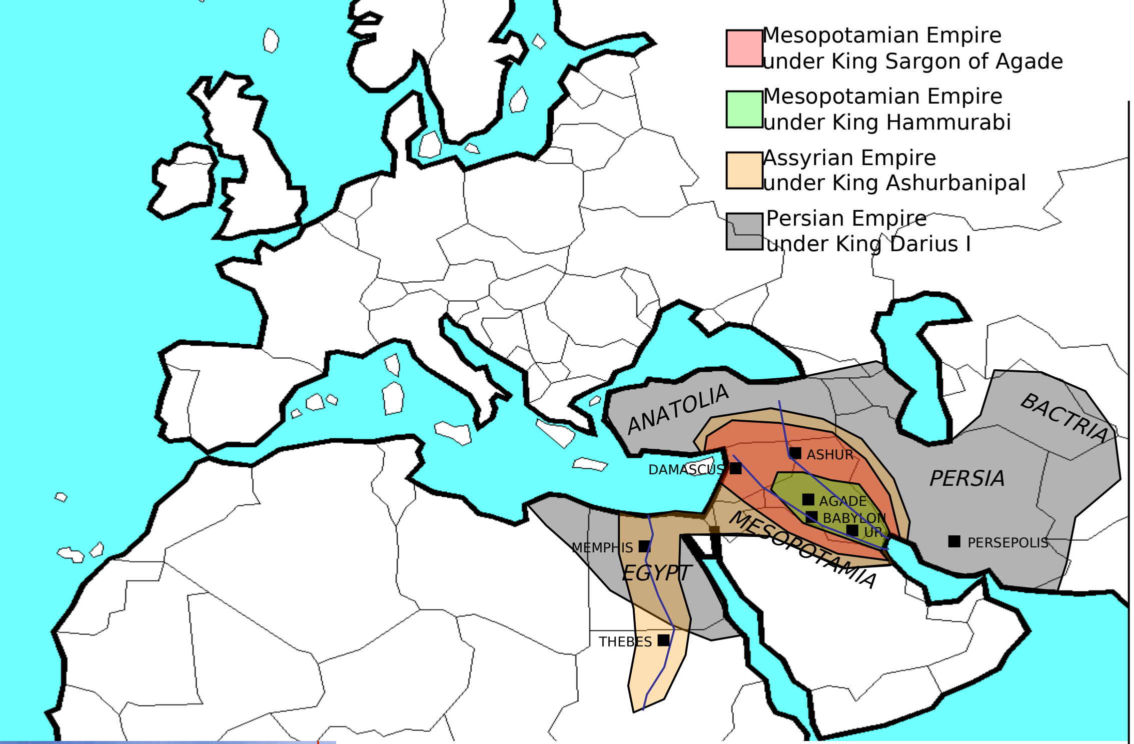
history of architecture

Near East


🟥 Mesopotamian Empire under King Sargon of Agade
🟩 Mesopotamian Empire under King Hammurabi
🟧 Assyrian Empire under King Ashurbanipal
⬜ Persian Empire under King Darius I
ANATOLIA
BACTRIA
ASHUR
DAMASCUS
PERSIA
AGADE
BABYLON
UR
PERSEPOLIS
MEMPHIS
EGYPT
MESOPOTAMIA
THEBES

INFLUENCES

HISTORY

- Started as villages on the flat land between Tigris and Euphrates rivers - *"Mesopotamia"*
- Turned into city-states with populations of thousands

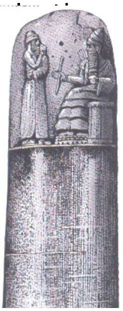
- Each city-state surrounded by a wall and dominated by a large temple
- Society of kings, craftsmen, soldiers, farmers, priests
- Fought and traded with each other
- Sometimes would conquer each other and form an empire

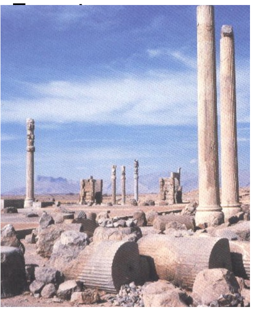
Mesopotamian

- City-states of Ur, Babylon, Agade, Ashur and Damascus
- 2334 BC, King Sargon of Agade formed the first major empire
- 1792 BC, next by King Hammurabi
- Instituted laws to keep order
- Invention of writing - pictograms or cuneiform records on clay tablets

Assyrian

- Based in Ashur, biggest empire under King Ashurbanipal – conquered Mesopotamia, Syria,





Persian

- Begun by Cyrus the Great from 559 to 529 BC
- Covered Mesopotamia, Anatolia, Eastern Mediterranean, Bactria, Indus Valley and North Africa
- Darius I had provinces ruled by a satrap, who guarded the roads, collected taxes and controlled the army
- Local peoples were allowed to keep their religions and customs
- Capital moved from Susa to Persepolis
- Network of roads linking the royal court to other parts of the empire – from Susa in Persia to Sardis in Anatolia
- Traded raw materials, carpets and spices

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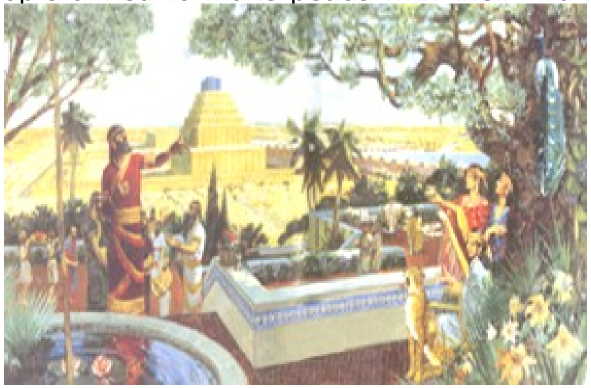
history of architecture

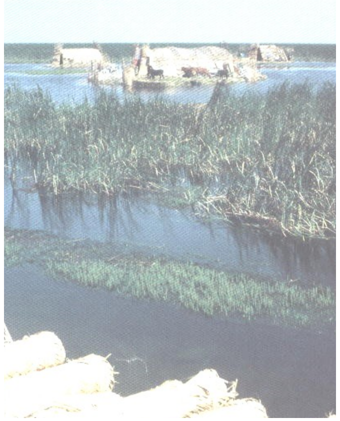
Near East

RELIGION

- Each city-state worshipped their own god for protection
- People aimed to make peace with their wrathful god



GEOGRAPHY



Fertile Crescent:

- Marshlands with few natural advantages aside from water and soil
- Import materials like hardwood and metals

Also:

- Deserts of the Arabian Peninsula
- Mountains and plateaux from west to east

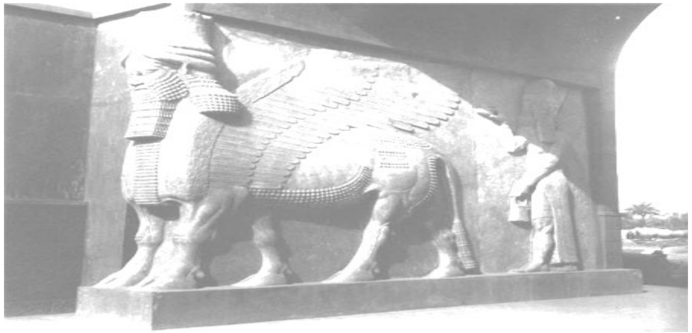
ARCHITECTURAL CHARACTER

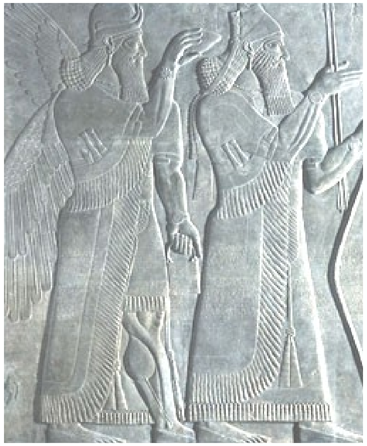
MATERIALS

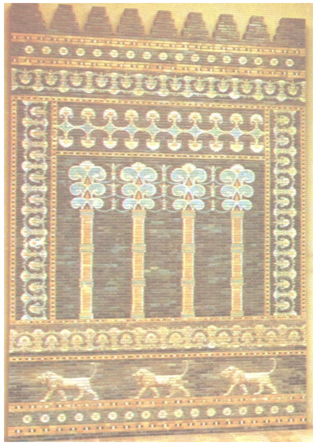
- Only materials readily available was clay, soil, reeds, rushes
- Bricks made of mud and chopped straw, sun-dried or kiln-fired
- Timber, copper, tin, lead gold, silver imported

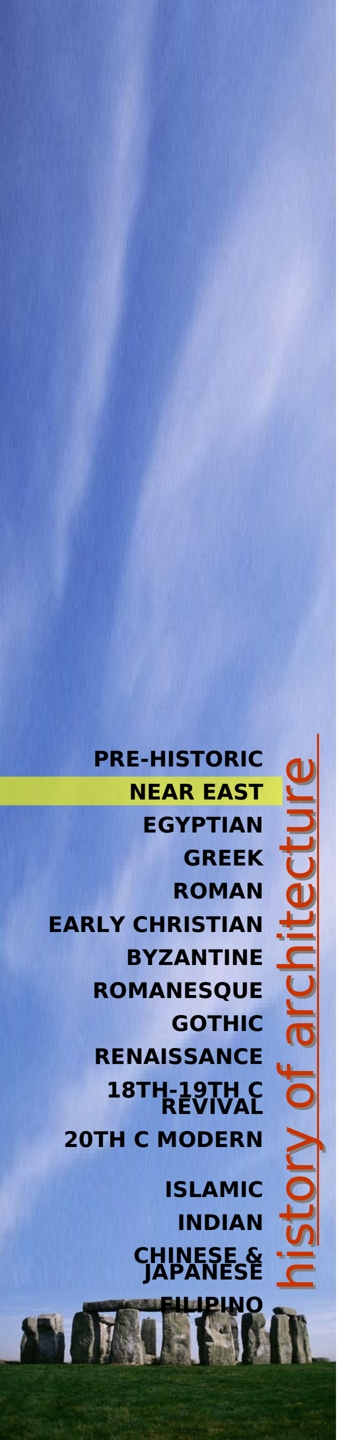
DECORATION

- Colossal winged-bulls guarding chief portals
- Polychrome glazed bricks in blue, white, yellow, green
- Murals of decorative continuous stone







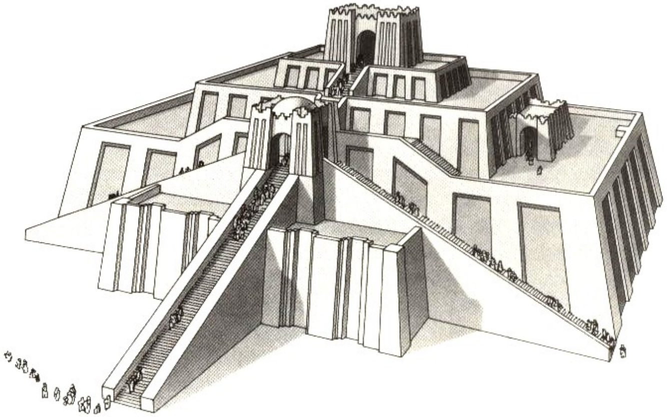


Near East

EXAMPLES

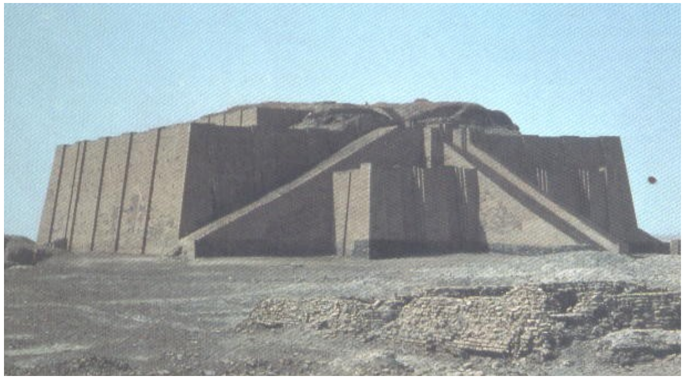
ZIGGURATS

- Religious buildings built next to temples
- On top was a small temple



Development:

- Archaic ziggurat
- Two or Three-staged ziggurat
- Seven-staged ziggurat during the Assyrian period

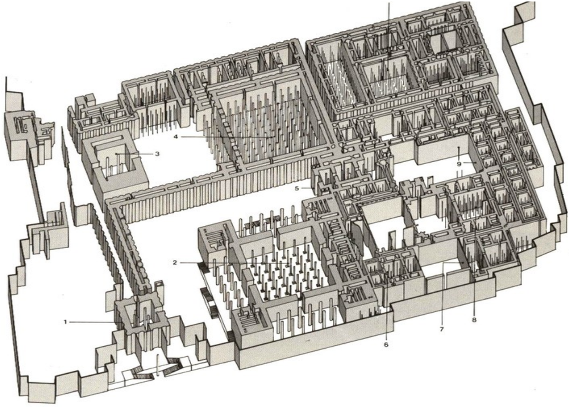


Ziggurat at Ur

- 2000 BC

PALACES

- Kings celebrated their victories, wealth and power by building large palaces



Palace Platform at Persepolis

- Ruins still exist
- 50 years to build
- People from all over the empire were involved in its construction
- Variety of architectural styles

- parts: audience halls, reception halls, storerooms for tributes and valuables, military quarters, apadana – tallest building, with 36 columns of 20m height

DWELLINGS

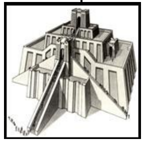
- Known as *Megaron*
- Entrance at end rather than on the long sides
- Portico - colonnaded space forming an entrance or vestibule, with a roof supported on one side by columns
- Suited to climate of Anatolian plateau

Egyptian

The Historical Timeline of Architecture

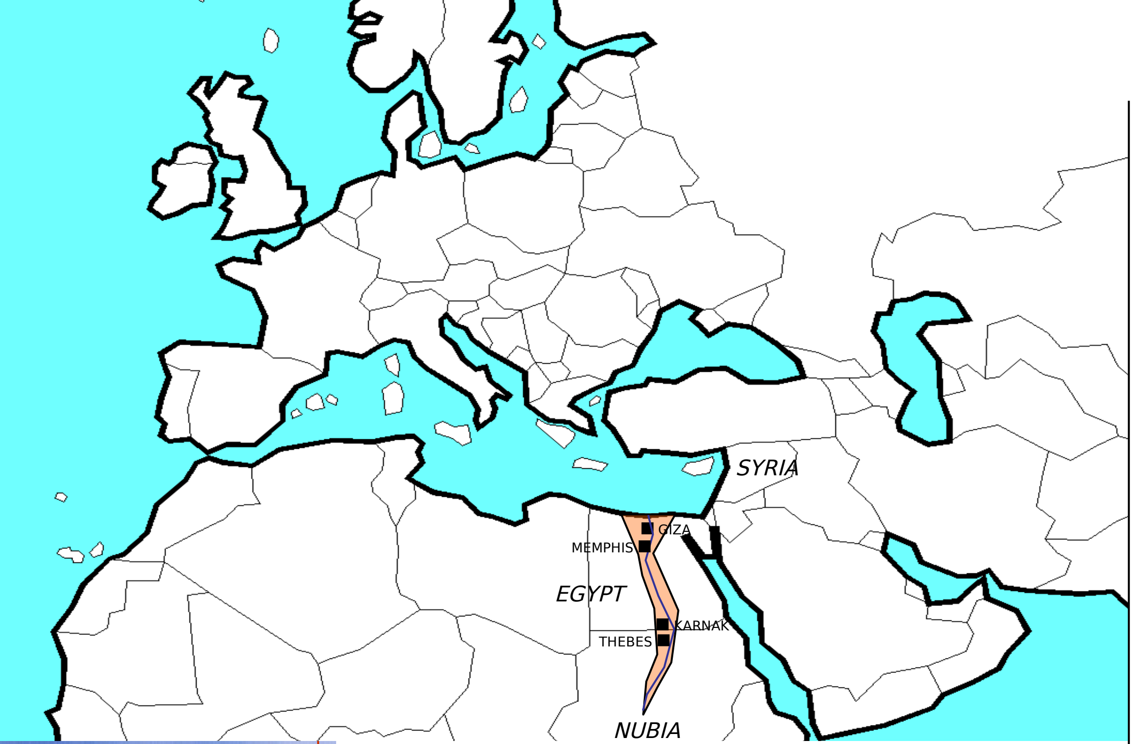
Egyptian

Pre-Historic



Near East

Egyptian



INFLUENCES

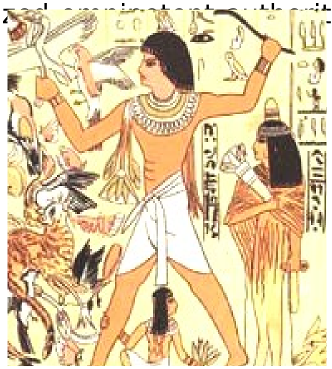
GEOGRAPHY & CLIMATE

- Narrow stretch of fertile and arable land along the Nile
- Beyond riverbanks, barren desert and rugged cliffs prevented attack from invaders
- Mediterranean and Red seas

HISTORY

- Wealthy country despite the desert - every year, Nile would overflow, leaving the land fertile for growing crops
- Nile River was a trade route
- Gold from Nubia in the south

- Two kingdoms, Lower and Upper Egypt, combined by King Menes in 3100 BC
- Many small towns, but royal cities at Memphis and Thebes
- A single kingdom for most of its existence - unified under the centralized omnipotent authority of the pharaoh (king)



Pharaohs:

- Seen as gods dwelling on earth
- Sole masters of the country and its inhabitants
- Builders and leaders
- Initiated the design, financing, quarrying and transporting of materials, organization of labor and construction itself

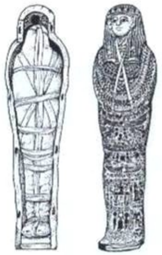
Society:

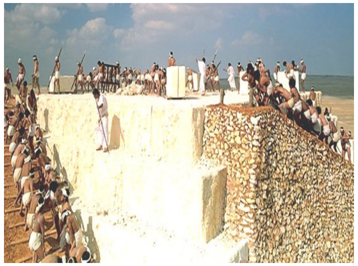
- Divided into groups, by order of importance: senior priests, officials, noblemen, and army commanders
- Most ordinary Egyptians were farmers
- Architects, engineers, theologians, masons, sculptors, painters, laborers, peasants, prisoners
- Weaving, glass-making, pottery, metal, jewelry and furniture

Egyptian

RELIGION

- Cult of many gods representing nature: sun, moon, stars, animals





- After death, a persons soul went on to enjoy eternal life in kingdom of the God Osiris - imagined this kingdom as a perfect version of Egypt
- Pharaohs were buried, bringing with them the things they might need in the afterlife, even living people
- Wished for a fine burial, embalmment and funeral rites, and a permanent tomb or "eternal dwelling"

- Dead body had to be preserved to house the spirit
- Remove insides, dry out the body, filled with linen, masked and bandaged

ARCHITECTURAL CHARACTER

DESCRIPTION

- Afterlife - life and house on earth is temporary, the tomb is permanent
- For sustenance and eternal enjoyment of the deceased
- Religion is the dominant element in Egyptian architecture

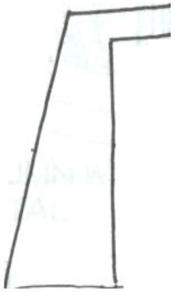
MATERIALS

- Stone was abundant in variety and quantity
- Used for monuments and religious buildings
- Durability of stone is why monuments still exist to this day

- Other materials, metals and timber were

ROOF & OPENINGS

- Roof was not an important consideration
- Flat roofs sufficed to cover and exclude heat
- No windows
- Spaces were lit by skylights, roof slits, clerestories

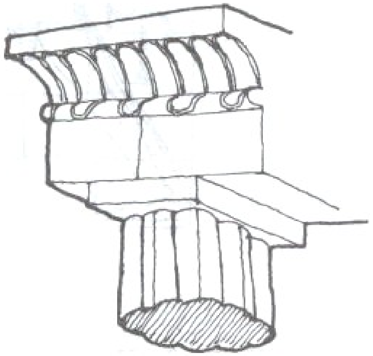


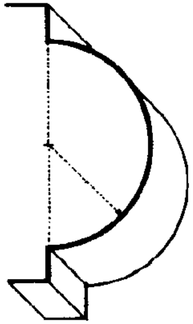
WALL

- Batter wall - diminishing in width towards the top for stability
- Thickness: 9 to 24m at temples
- Unbroken massive walls, uninterrupted space for hieroglyphics

DECORATIONS

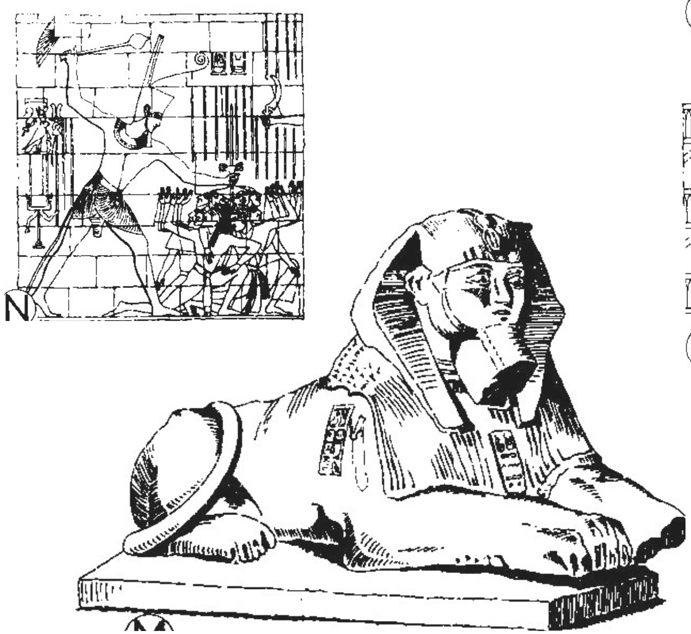
- Mouldings such as "gorge" or "hollow and roll" was inspired by reeds

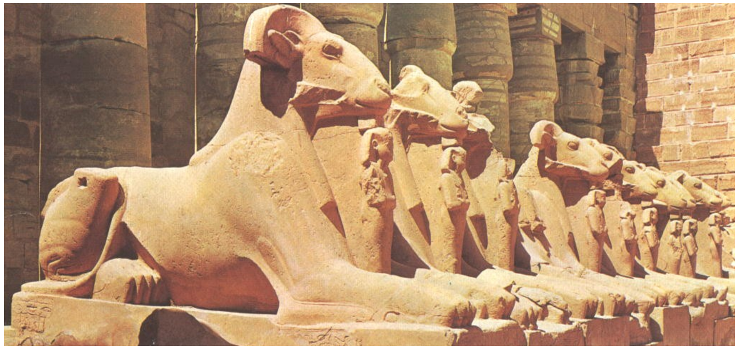




Egyptian

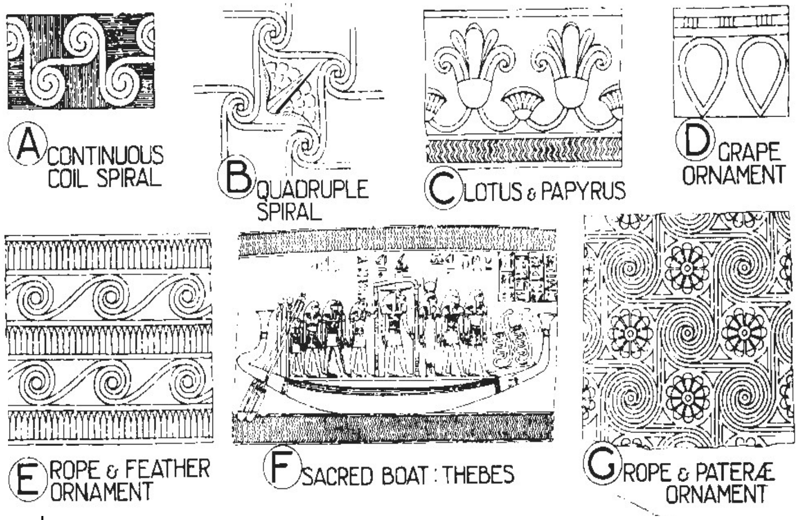
- Hieroglyphics were pictorial representations of religion, history and daily life
- Derived from the practice of scratching pictures on mud-plaster walls





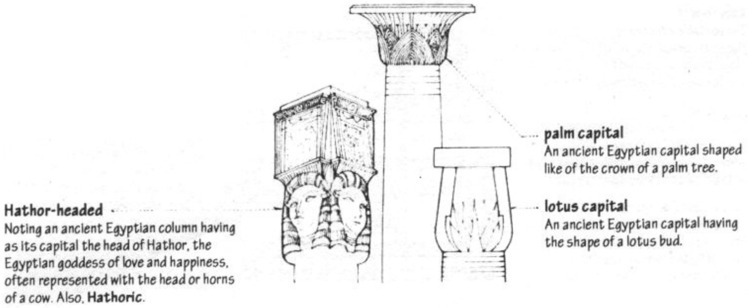
- Avenue of sphinxes: rows of monsters (body of lion, head of man, hawk, ram) leading to monuments

Common ornaments:


A CONTINUOUS COIL SPIRAL
B QUADRUPLE SPIRAL
C LOTUS & PAPYRUS
D GRAPE ORNAMENT
E ROPE & FEATHER ORNAMENT
F SACRED BOAT : THEBES
G ROPE & PATERÆ ORNAMENT

- Common capitals used were the lotus, papyrus, palm which echoed indigenous Egyptian plants, and were symbols of fertility as well

- The shaft represented bundle of stems



Hathor-headed
Noting an ancient Egyptian column having as its capital the head of Hathor, the Egyptian goddess of love and happiness, often represented with the head or horns of a cow. Also, **Hathoric**.

palm capital
An ancient Egyptian capital shaped like of the crown of a palm tree.

lotus capital
An ancient Egyptian capital having the shape of a lotus bud.

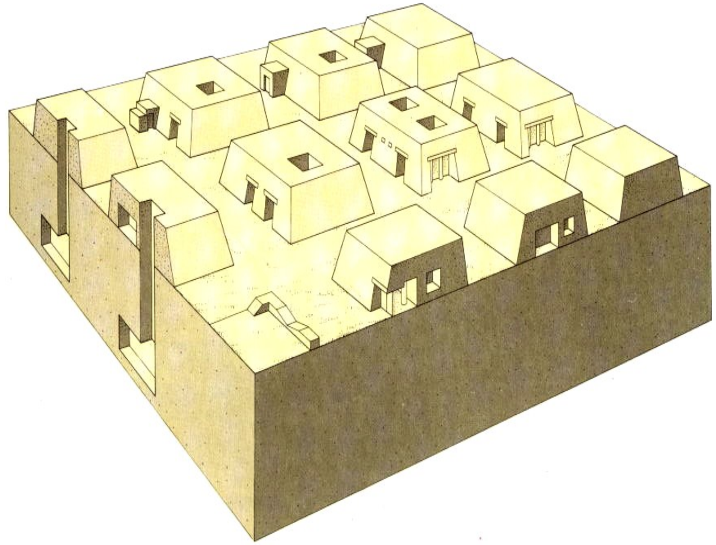
Egyptian

EXAMPLES

MASTABAS

- Rectangular flat-topped funerary mound, with battered side, covering a burial chamber below ground

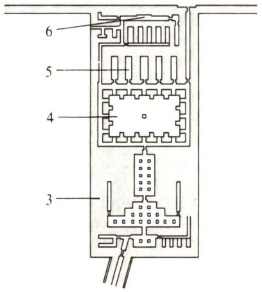
- First type of Egyptian tomb
- Developed from small and inconspicuous to huge an imposing

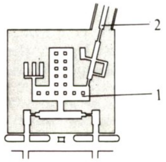


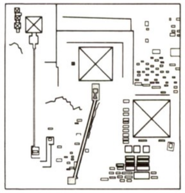
Parts:
- Stairway with 2 doors: one for ritual, second was a false door for spirits
- Column Hall
- Offering Chapel
- Serdab (contains statue of deceased)
- Offering room with Stelae (stone with name of deceased inscribed)
- Offering table
- Sarcophagus – Egyptian coffin

PYRAMIDS

- massive funerary structure of stone or brick

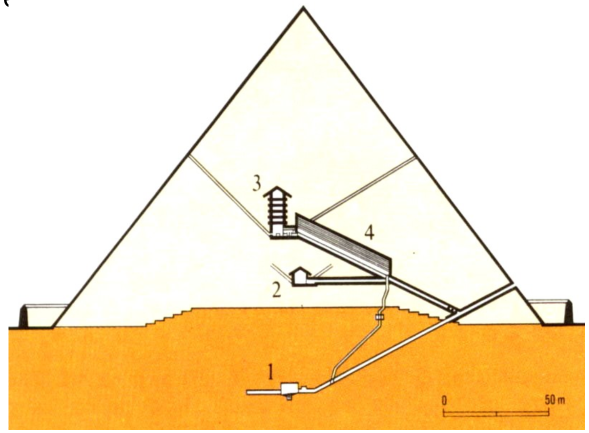






Came in complexes:
- Offering chapel (north or east side)
- Mortuary chapel
- Raised and enclosed causeway leading to west
- Valley building for embalmment and internment rites

- Immense use of labor and materials, built in laye



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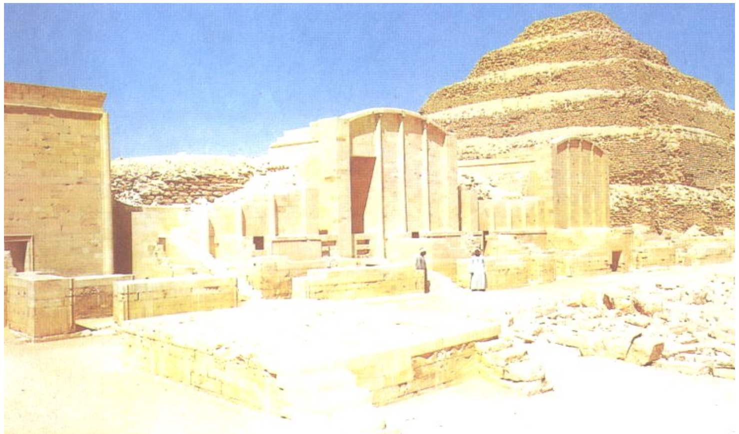
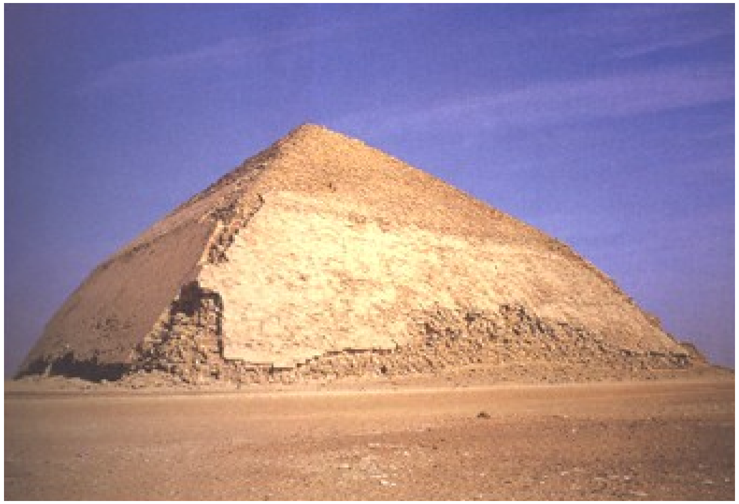
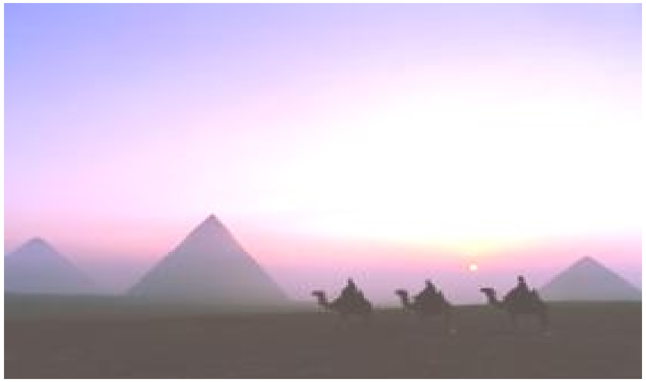
Egyptian



Step Pyramid of Zoser, Saqqara
- World's first large-scale monument in stone
- Designed by Imhotep

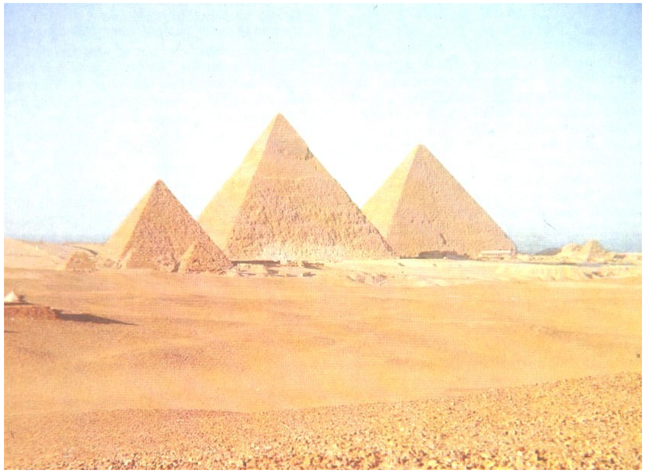


Bent Pyramid at Seneferu



Pyramids at Gizeh
- Most magnificent of pyramids
- Equilateral sides face cardinal points
- Forms a world-famous building group

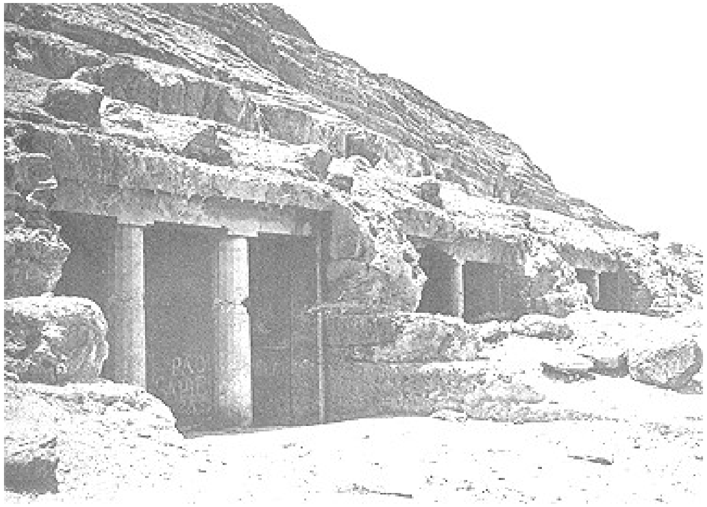
- Pyramid of Cheops (Khufu)
- Pyramid of Chephren (Khafra or Khafre)
- Pyramid of Mykerinos (Menkaura)
- The Great Sphinx shows King Chepren as a man-lion protecting his country



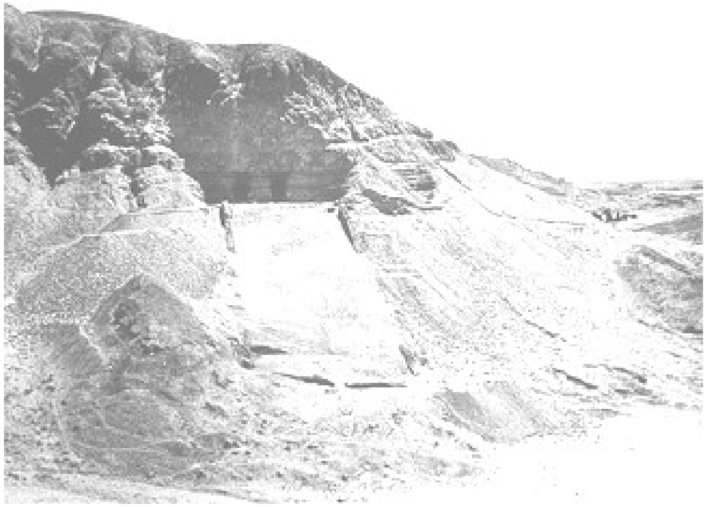
Egyptian

ROCK-CUT or ROCK-HEWN TOMBS

- Built along hillside
- For nobility, not royalty



Tombs at Beni Hasan



Tombs of the Kings, Thebes

TEMPLES

MORTUARY TEMPLES

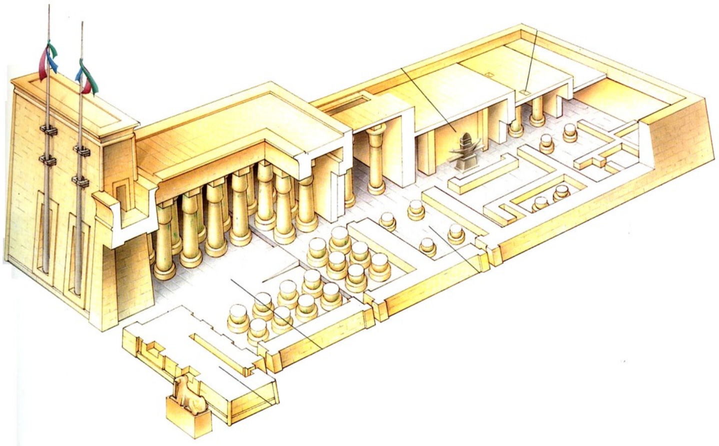
- worship/ in honor of pharaohs

CULT TEMPLES

- worship/ in honor of god

Parts:

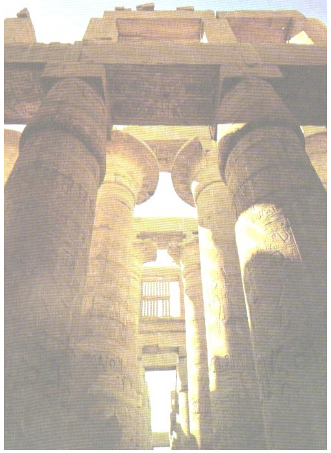
- Entrance pylon
- Large outer court open to sky (hypaethral court)
- Hypostyle hall
- Sanctuary surrounded by passages
- Chapels/chambers used in connection with the temple service



Temple of Khons

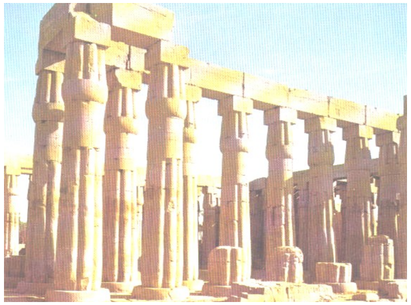
- Typical temple: pylons, court, hypostyle hall, sanctuary, chapels all enclosed by high girdle wall
- Avenue of sphinxes and obelisks fronting pylons

Egyptian

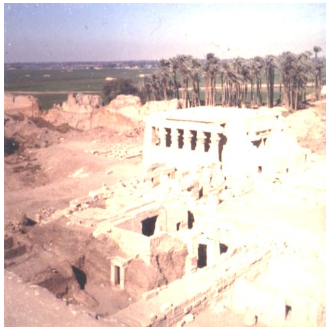


Great Temple of Ammon, Karnak, Thebes

- Grandest temple and the work of many kings

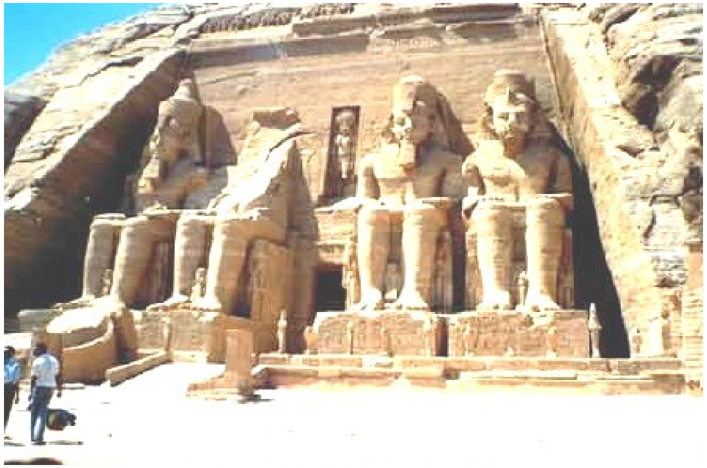


Temple of Ammon, Luxor



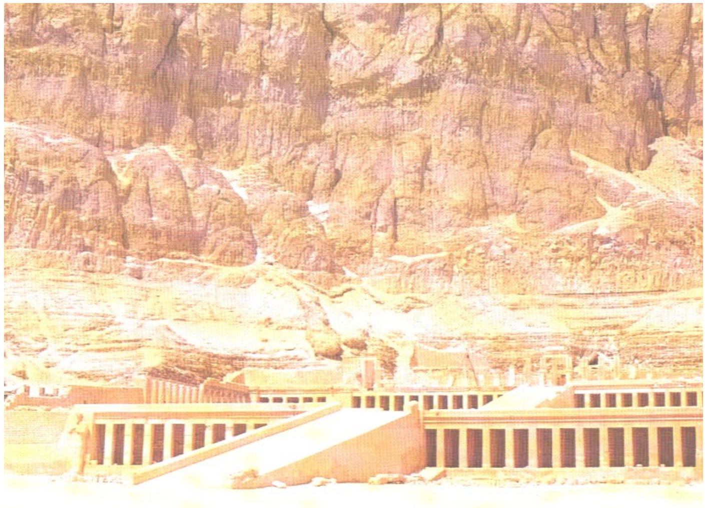
Mammisi Temple

- Became the prototype of the Greek Doric temples



Great Temple of Abu-Simbel

- Example of rock-cut temple
- Constructed by Rameses II
- Entrance forecourt leads to imposing pylon with 4 rock-cut colossal statues of Rameses sitting over 20 m high



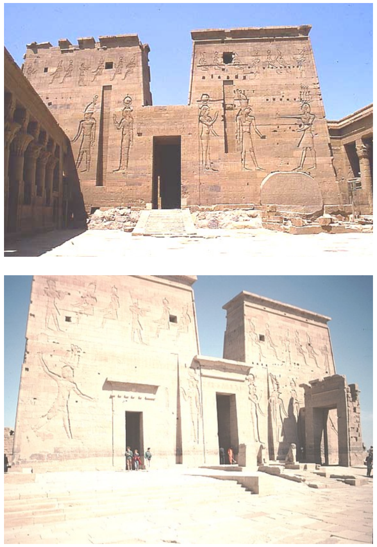
Temple of Hatshepsut, Deir el-Bahri

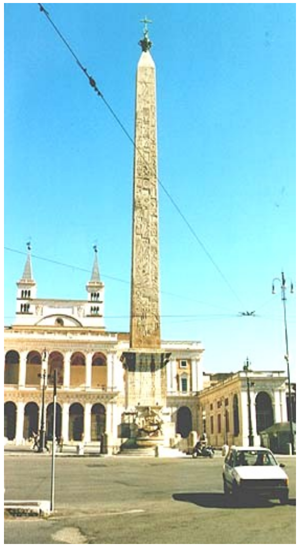
Egyptian

PYLONS

- monumental gateway to the temple consisting of slanting walls flanking the entrance portal

Temple of Isis, Philae





OBELISKS

- upright stone square in plan, with an electrum-capped pyramidion on top
- sacred symbol of sun-god Heliopolis
- usually came in pairs fronting temple entrances
- height of nine or ten times the diameter at the base
- four sides feature hieroglyphics

Obelisk, Piazza of S. Giovanni

- originally from Temple of Ammon, Karnak

DWELLINGS

- Made of crude brick
- One or two storey high
- Flat roof deck

3 parts:

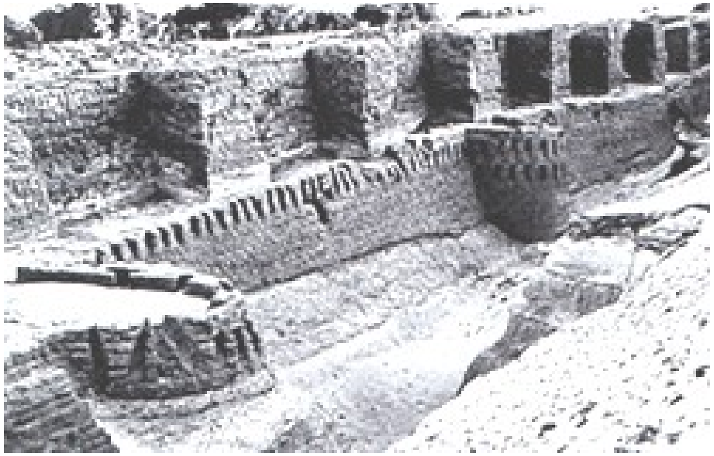
- Reception suite on north side - central hall or living room with high ceiling and clerestory
- Service quarters
- Private quarters

FORTRESSES

- Mostly found on west bank of Nile or on islands
- Close communications with other fortresses

Fortress of Buhen

- Headquarters & largest fortified town near Nubia
- From here they could trade and invade lands to the south



Greek

The Historical Timeline of Architecture

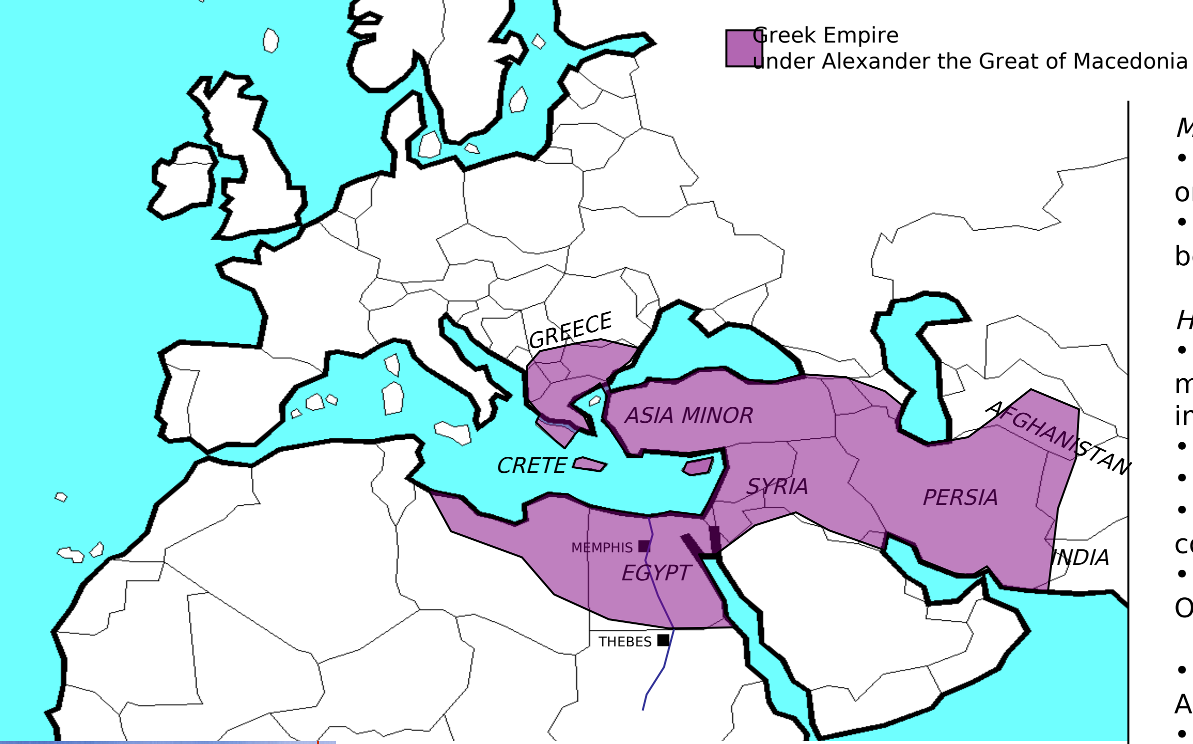
Egyptian

Pre-Historic

Greek

Near East

Greek



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INFLUENCES

HISTORY

Aegean Period (Minoan)

- Civilizations on Crete and Greek mainland from 1900 to 1100 BC
- The first great commercial and naval power in the Mediterranean, founded on trade with the whole eastern seaboard: Asia Minor, Cyprus, Syria, Palestine, Egypt and Libya, even South Italy and Sicily on the west
- Trade and communications produced a unity of culture and economic stability
- Knossos was the largest city, had a magnificent palace

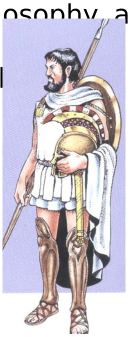
Mycenaean or Helladic (1550 to 1100 BC)

- Continuation of Cretan ideas and craftsmanship on mainland Greece
- Wealth due to their control of metal trading between Europe and Middle East

Hellenic Period (800 to 323 BC)

- City-states developed on the plains between mountains – Sparta and Athens were most important
- The "polis" emerged as the basis of Greek society
- Each had its own ruler, government and laws
- A federal unity existed between city-states due to common language, customs, religion
- Several different forms of government: Oligarchic, Tyrannic, Democratic

- Under Pericles (444 BC to 429 BC), peak of Athenian prosperity
- Outburst of building activity and construction, developments in art, law-making, philosophy and science
- Philosophers – Socrates, Plato, Aristotl



- Among best soldiers in the ancient world – Hoplite Army defeated repeated invasions by Darius and Xerxes of Persia
- Alexander the Great of Macedonia conquered Persia, Asia Minor, Egypt, Syria, Afghanistan
- Greek language and culture reached an enormous area

Hellenistic Period (323 to 30 BC)

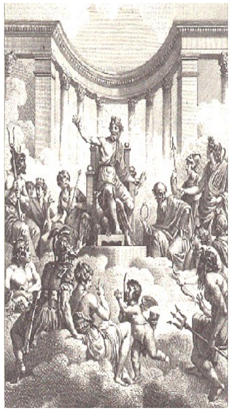
Greek

GEOLOGY & CLIMATE

- On the mainland, rugged mountains made communication difficult
- Mountains separated inhabitants into groups, clans, states
- archipelago and islands: sea was the inevitable means of trade and communications

- Between rigorous cold and relaxing heat
- Clear atmosphere and intense light - conducive to creating precise and exact forms
- Judicial activities, dramatic presentations, public ceremonies took place in the open air

RELIGION



Aegean religion:

- Primitive stage of nature worship
- Priestesses conducted religious rites, sacred games, ritual dances, worship on sacrificial altars

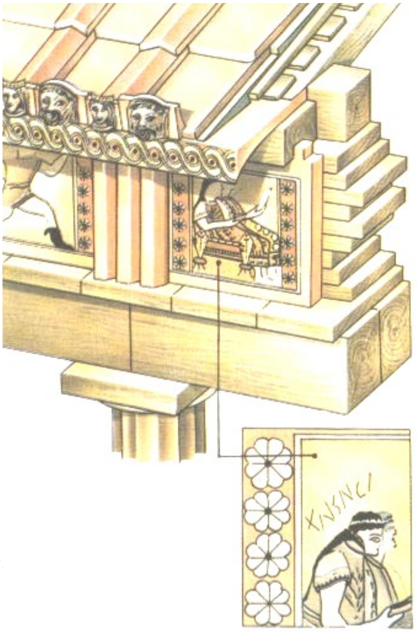
Greek religion:

- A highly developed form of nature worship
- Gods as personifications of natural elements, or deified mortals
- Gods could influence events in the human world

- Greeks sought advice from oracles – oracle at Delphi

ARCHITECTURAL CHARACTER

DESCRIPTION



Aegean

- Rough and massiv

Hellenic

- Mostly religious architecture
- "carpentry in marble“ - timber forms imitated in stone with remarkable exactness

Hellenistic

- Not religious in character, but civic – for the people
- Provided inspiration for Roman building types
- Dignified and gracious structures
- Symmetrical, orderly

CONSTRUCTION SYSTEM

- Columnar and trabeated
- Roof truss appeared, enabling large spaces to be unhindered by columns

MATERIALS

- Timber and terra cotta
- Stone

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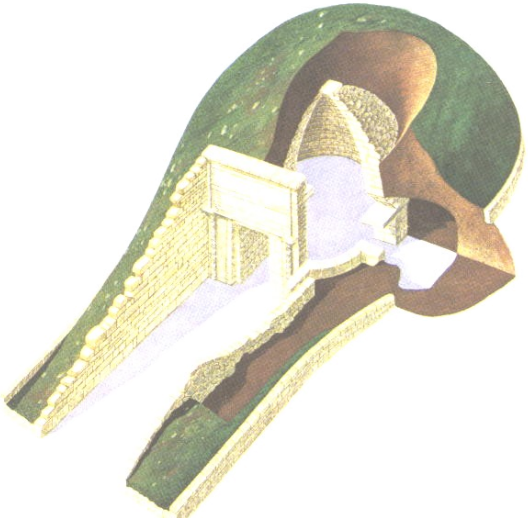
Greek

EXAMPLES

HOUSES

On islands:
- Flat roofing
- Drawn together in blocks
- Two to four storeys high
- Light admitted through light wells

On mainland:
- Single-storeyed house with deep plan
- Columned entrance porch with central doorway
- Living apartment proper with sleeping room behind



TOMBS
- rock-cut or chamber tombs - “tholos” tomb

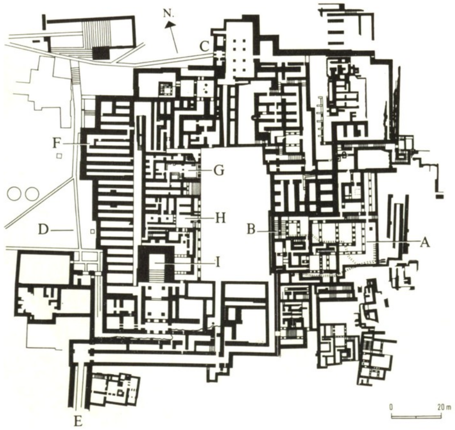
Treasury of Atreus, Mycenae

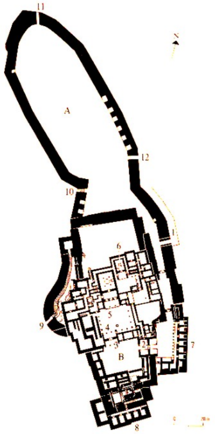
PALACES

Palace of King Minos, Knossos

Palace at Tyrins

Lion Gate, Mycenae





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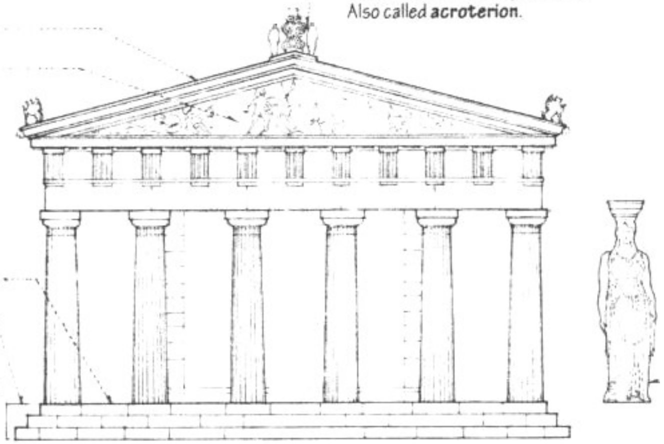
TEMPLES

- Chief building type
- Earliest ones resembled megaron in plan and construction

- Number of columns at entrance:

1 column – hemostyle
2 columns – distyle
3 columns – tristyle
4 columns – tetrastyle
5 columns – pentastyle
6 columns – hexastyle
7 columns – heptastyle
8 columns – octastyle
9 columns – enneastyle
10 columns – decastyle
12 columns – dodecastyle



acroterium
A pedestal for a sculpture or ornament at the apex or at each of the lower corners of a pediment. Also called **acroterion**.

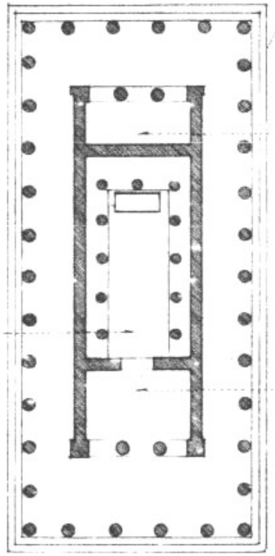
pediment
A wide, low-pitched gable surmounting a colonnade or a major division of a facade.

tympanum
The triangular space enclosed by the horizontal and raking cornices of a pediment, often recessed and decorated with sculpture.

stylobate
A course of masonry forming the foundation for a row of columns, esp. the outermost colonnade of a classical temple.

stereobate
A solid mass of masonry visible above ground level and serving as the foundation of a building, esp. the platform forming the floor and substructure of a classical temple. Also called **crepidoma**, **podium**.

Greek temple
A temple built as a shrine to the ancient Greek god or goddess to whom it was dedicated. Since the temple was not intended for internal worship, it was built with special regard for external effect. It stood on a stylobate of three or more steps, with a cella containing the statue of the deity and front and rear porticoes, the whole being surmounted by a low gable roof of timber, covered in terra-cotta or marble tiles.



epinaos
The rear vestibule of a classical temple. Also called **opisthodomus**, **posticum**.

altar
An elevated place or structure upon which sacrifices are offered or incense burned in worship, or before which religious rites are performed.

cella
The principal chamber or enclosed part of a classical temple, where the cult image was kept. Also called **naos**.

pronaos
An open vestibule before the cella of a classical temple. Also called **anticum**.

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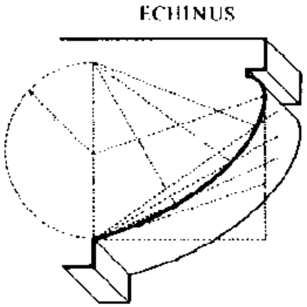
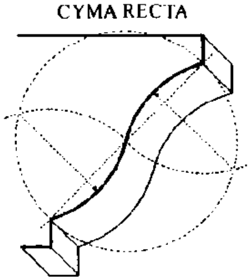
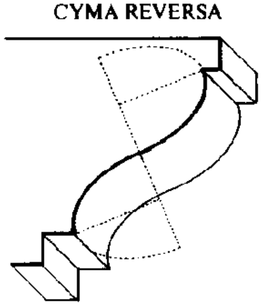
Greek

MOULDINGS

- Architectural devices, which with light and shade, produce definition to a building
- Could be refined and delicate in contour, due to fineness of marble and the clarity of atmosphere and light



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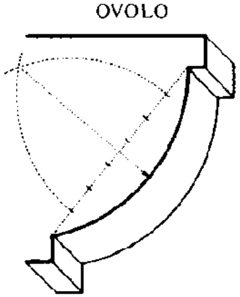

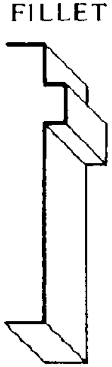

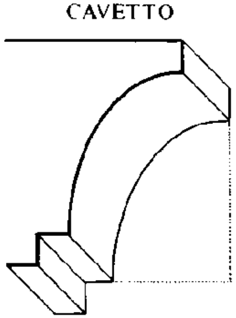

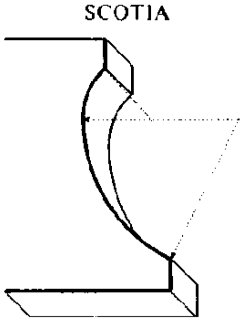

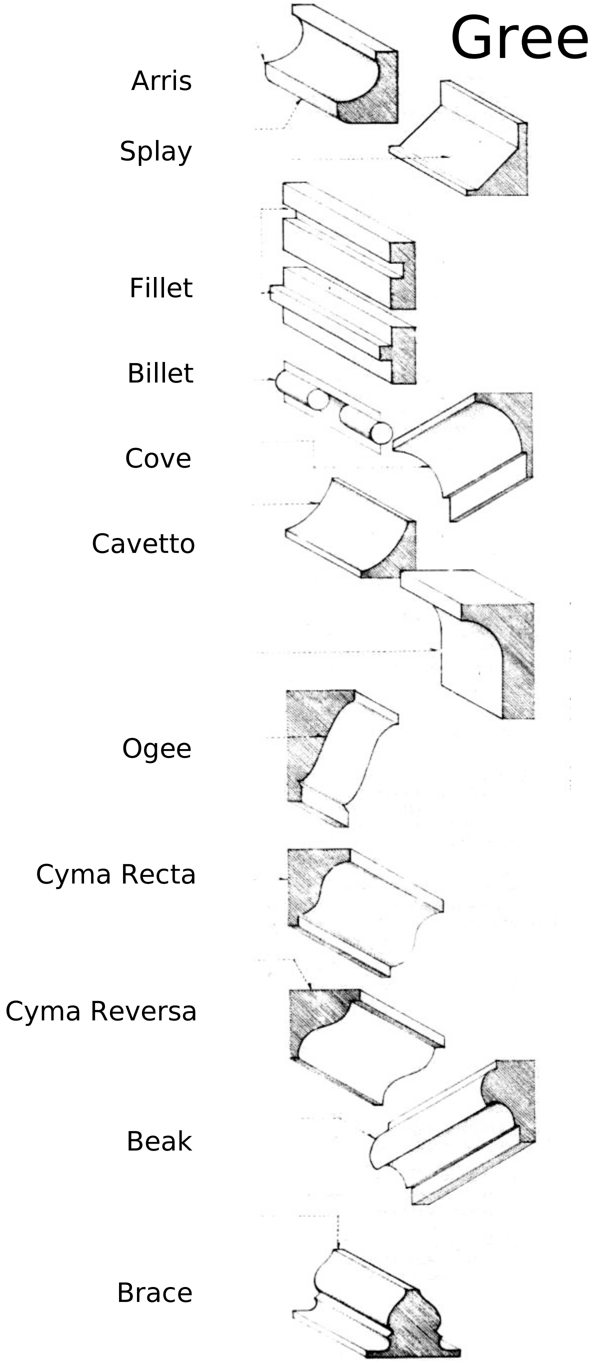
Arris
Splay
Fillet
Billet
Cove
Cavetto
Ogee
Cyma Recta
Cyma Reversa
Beak
Brace

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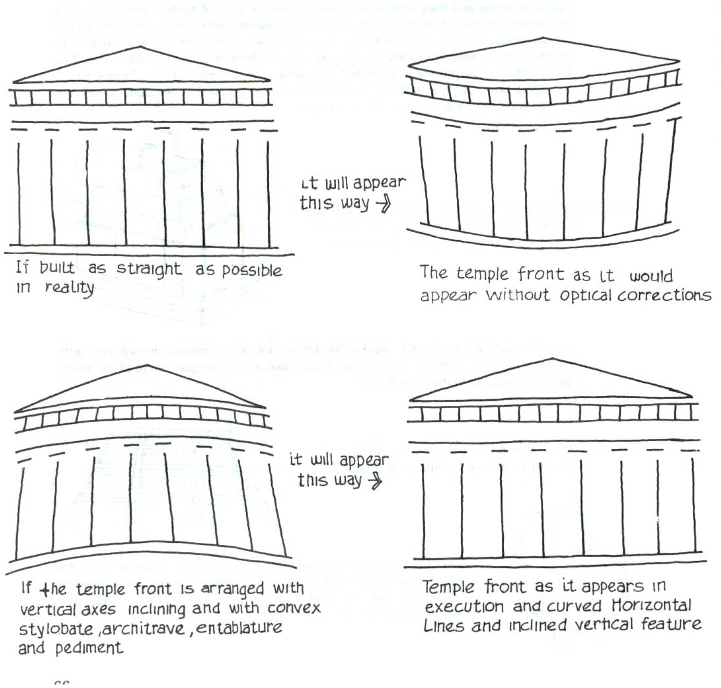
Greek

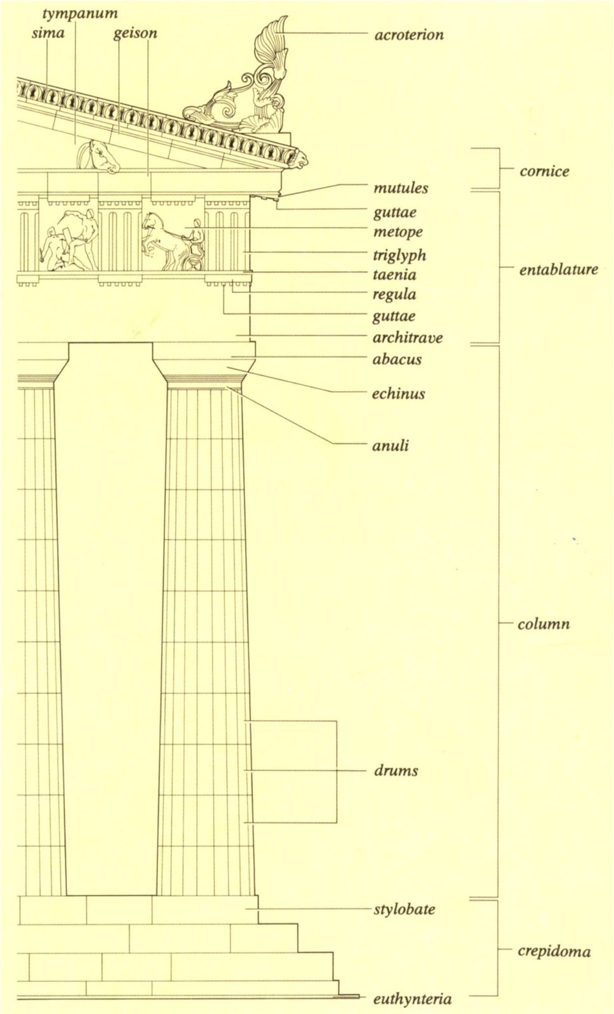
- Certain refinements used to correct optical illusions:
- Horizontal lines built convex to correct sagging
- Vertical features inclined inwards to correct appearance of falling outwards
- On columns, entasis was used, swelling outwards to correct appearance of curving inwards


If built as straight as possible in reality
It will appear this way →
The temple front as it would appear without optical corrections
If the temple front is arranged with vertical axes inclining and with convex stylobate, architrave, entablature and pediment
it will appear this way →
Temple front as it appears in execution and curved Horizontal Lines and inclined vertical feature

METHODS OF NATURAL LIGHTING
- no windows
- clerestory - situated between roof and upper portion of wall
- skylight - made of thin, translucent marble
- temple door, oriented towards the east

GREEK ORDERS
- Shaft, Capital, and Horizontal entablature (architrave, frieze, cornice)

- Originally, Doric and Ionic, named after the two main branches of Greek race
- Then there evolved Corinthian, a purely decorative order


tympanum
sima
geison
acroterion
cornice
mutules
guttae
metope
triglyph
taenia
regula
guttae
architrave
abacus
entablature
echinus
anuli
column
drums
stylobate
crepidoma
euthynteria

Greek

DORIC ORDER

- Without base, directly on crepidoma
- Height (including capital) of 4 to 6 times the diameter at the base
- Shaft diminishes at top from 3/4 to 2/3 of base diameter
- Divided into 20 shallow flutes separated by arrises

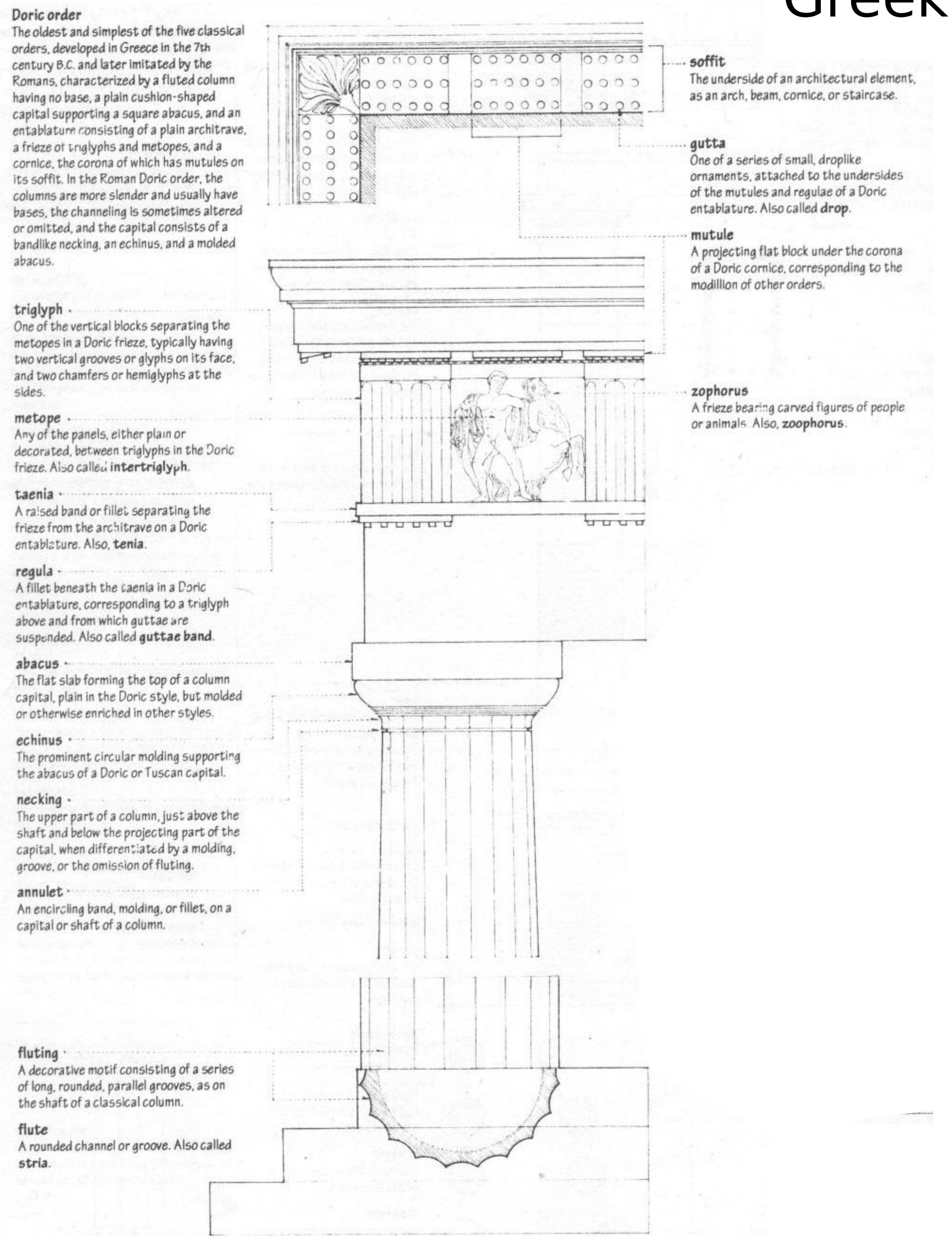
- Doric capitals had two parts - the square abacus above and circular bulbous echinus below

Doric entablature:

- Height is 1 and 3/4 times the lower diameter in height

3 main divisions:

- Architrave, principal beam of 2 or 3 slabs in depth
- Frieze
- Cornice, mouldings



Doric order
The oldest and simplest of the five classical orders, developed in Greece in the 7th century B.C. and later imitated by the Romans, characterized by a fluted column having no base, a plain cushion-shaped capital supporting a square abacus, and an entablature consisting of a plain architrave, a frieze of triglyphs and metopes, and a cornice, the corona of which has mutules on its soffit. In the Roman Doric order, the columns are more slender and usually have bases, the channeling is sometimes altered or omitted, and the capital consists of a bandlike necking, an echinus, and a molded abacus.

triglyph
One of the vertical blocks separating the metopes in a Doric frieze, typically having two vertical grooves or glyphs on its face, and two chamfers or hemiglyphs at the sides.

metope
Any of the panels, either plain or decorated, between triglyphs in the Doric frieze. Also called **intertriglyph**.

taenia
A raised band or fillet separating the frieze from the architrave on a Doric entablature. Also, **tenia**.

regula
A fillet beneath the taenia in a Doric entablature, corresponding to a triglyph above and from which guttae are suspended. Also called **guttae band**.

abacus
The flat slab forming the top of a column capital, plain in the Doric style, but molded or otherwise enriched in other styles.

echinus
The prominent circular molding supporting the abacus of a Doric or Tuscan capital.

necking
The upper part of a column, just above the shaft and below the projecting part of the capital, when differentiated by a molding, groove, or the omission of fluting.

annulet
An encircling band, molding, or fillet, on a capital or shaft of a column.

fluting
A decorative motif consisting of a series of long, rounded, parallel grooves, as on the shaft of a classical column.

flute
A rounded channel or groove. Also called **stria**.

soffit
The underside of an architectural element, as an arch, beam, cornice, or staircase.

gutta
One of a series of small, droplike ornaments, attached to the undersides of the mutules and regulae of a Doric entablature. Also called **drop**.

mutule
A projecting flat block under the corona of a Doric cornice, corresponding to the modillion of other orders.

zophorus
A frieze bearing carved figures of people or animals. Also, **zoophorus**.

Greek

IONIC ORDER

- Volute or scroll capital (derived from Egyptian lotus and Aegean art)

Ionic column:

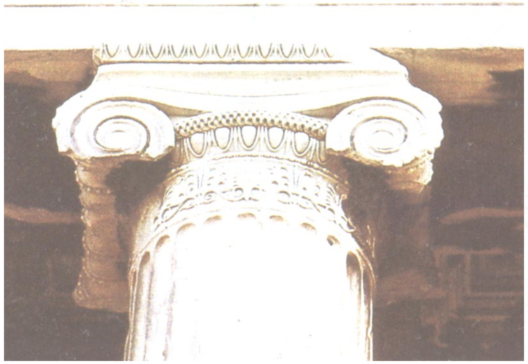
- More slender than Doric
- Needed a base to spread load
- Height was 9 times the base diameter
- Has 24 flutes separated by fillets
- Upper and lower torus

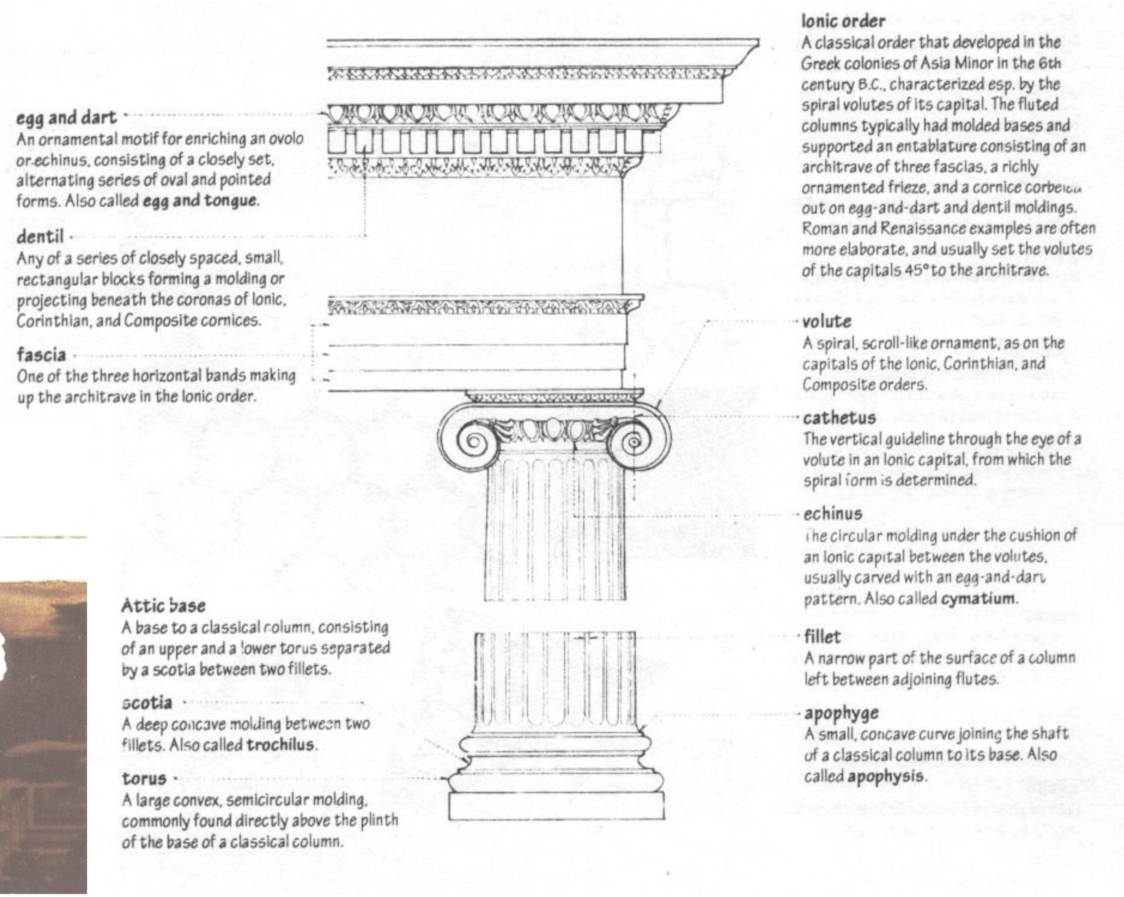
Ionic entablature:

- Height was 2 and 1/4 times the diameter of column

Two parts:

- Architrave,with fasciae
- Cornice
- No frieze





egg and dart
An ornamental motif for enriching an ovolo or echinus, consisting of a closely set, alternating series of oval and pointed forms. Also called **egg and tongue**.

dentil
Any of a series of closely spaced, small, rectangular blocks forming a molding or projecting beneath the coronas of Ionic, Corinthian, and Composite cornices.

fascia
One of the three horizontal bands making up the architrave in the Ionic order.

Attic base
A base to a classical column, consisting of an upper and a lower torus separated by a scotia between two fillets.

scotia
A deep concave molding between two fillets. Also called **trochilus**.

torus
A large convex, semicircular molding, commonly found directly above the plinth of the base of a classical column.

Ionic order
A classical order that developed in the Greek colonies of Asia Minor in the 6th century B.C., characterized esp. by the spiral volutes of its capital. The fluted columns typically had molded bases and supported an entablature consisting of an architrave of three fascias, a richly ornamented frieze, and a cornice corbeled out on egg-and-dart and dentil moldings. Roman and Renaissance examples are often more elaborate, and usually set the volutes of the capitals 45° to the architrave.

volute
A spiral, scroll-like ornament, as on the capitals of the Ionic, Corinthian, and Composite orders.

cathetus
The vertical guideline through the eye of a volute in an Ionic capital, from which the spiral form is determined.

echinus
The circular molding under the cushion of an Ionic capital between the volutes, usually carved with an egg-and-dart pattern. Also called **cymatium**.

fillet
A narrow part of the surface of a column left between adjoining flutes.

apophyge
A small, concave curve joining the shaft of a classical column to its base. Also called **apophysis**.

CORINTHIAN ORDER

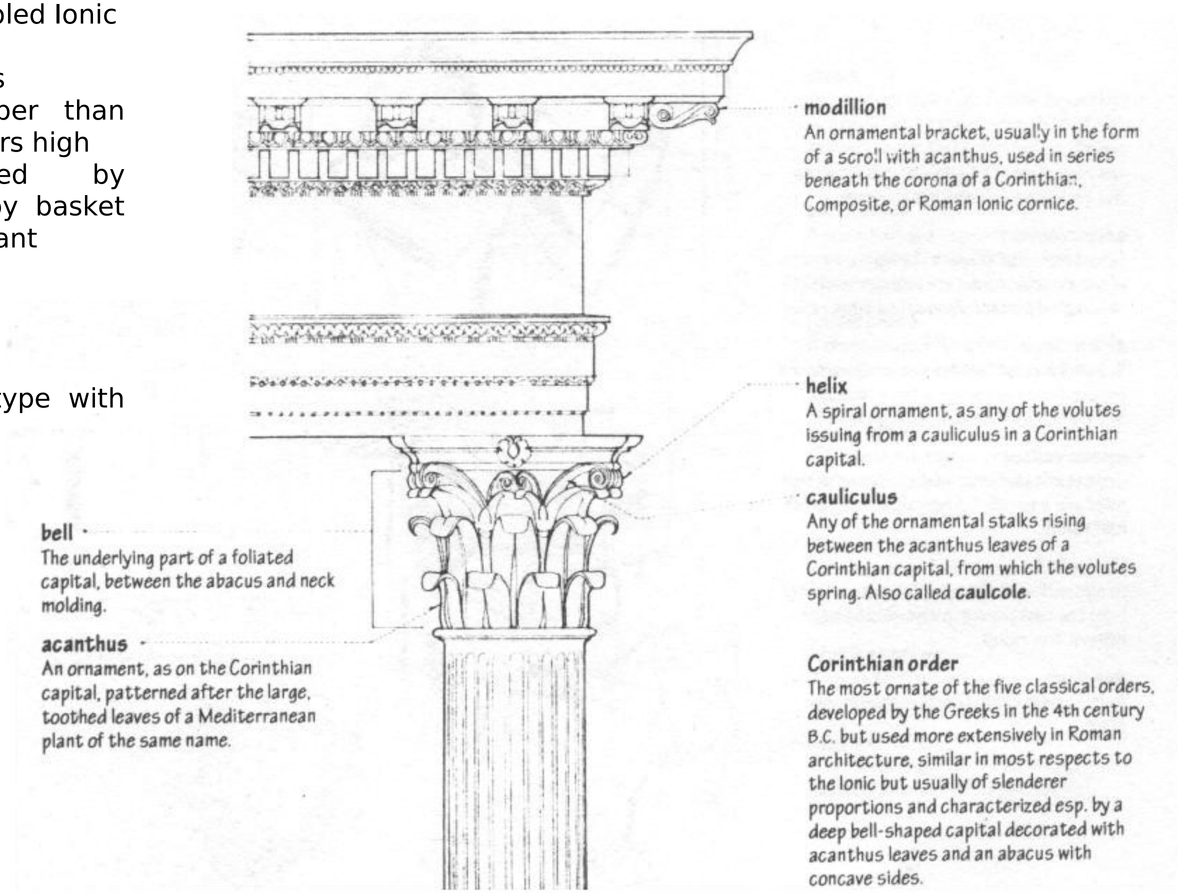
- Decorative variant of Ionic Order

Corinthian column:

- Base and shaft resembled Ionic
- More slender
- Height of 10 diameters
- Capital: much deeper than Ionic, 1 and 1/6 diameters high
- Capital invented by Callimachus, inspired by basket over root of acanthus plant

3 parts:

- Architrave,
- Frieze,
- Cornice, developed type with dentils



modillion
An ornamental bracket, usually in the form of a scroll with acanthus, used in series beneath the corona of a Corinthian, Composite, or Roman Ionic cornice.

helix
A spiral ornament, as any of the volutes issuing from a cauliculus in a Corinthian capital.

cauliculus
Any of the ornamental stalks rising between the acanthus leaves of a Corinthian capital, from which the volutes spring. Also called **caulcole**.

bell
The underlying part of a foliated capital, between the abacus and neck molding.

acanthus
An ornament, as on the Corinthian capital, patterned after the large, toothed leaves of a Mediterranean plant of the same name.

Corinthian order
The most ornate of the five classical orders, developed by the Greeks in the 4th century B.C. but used more extensively in Roman architecture, similar in most respects to the Ionic but usually of slenderer proportions and characterized esp. by a deep bell-shaped capital decorated with acanthus leaves and an abacus with concave sides.

PRE-HISTORIC
NEAR EAST
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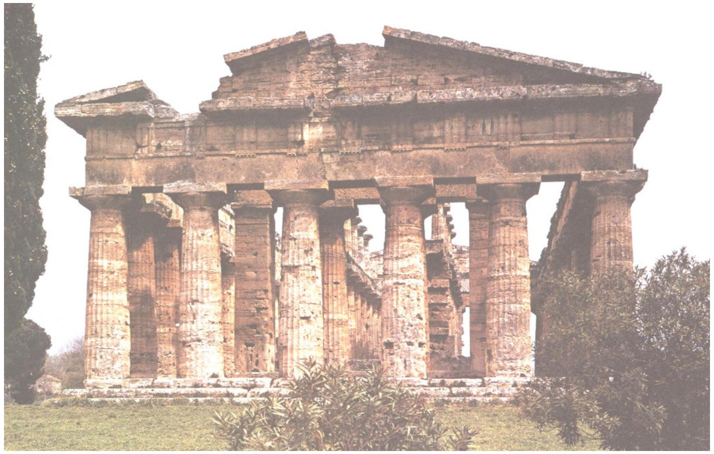
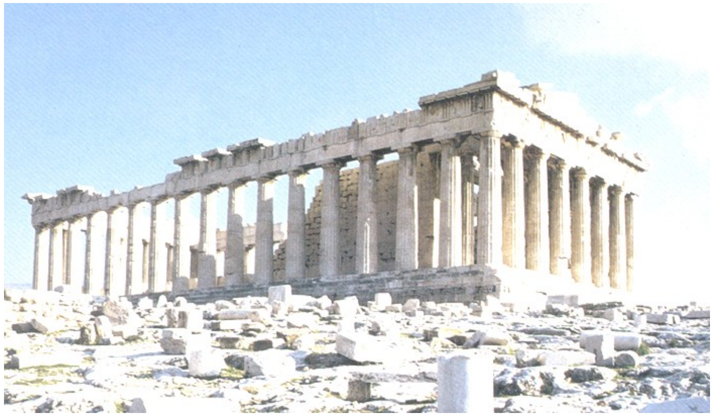
history of architecture

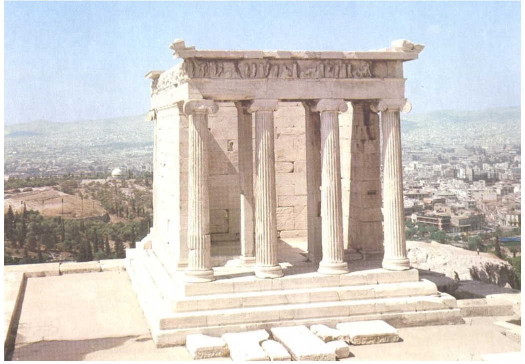
Greek



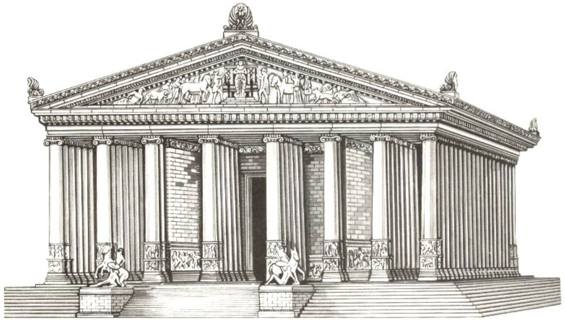
Temple of Hera, Paestum



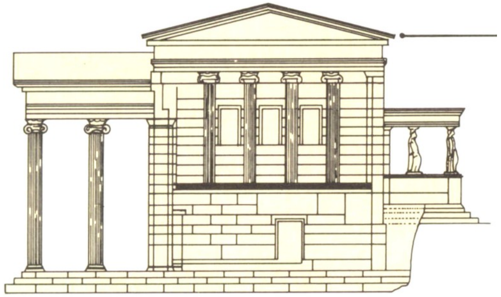
The Parthenon, Acropolis



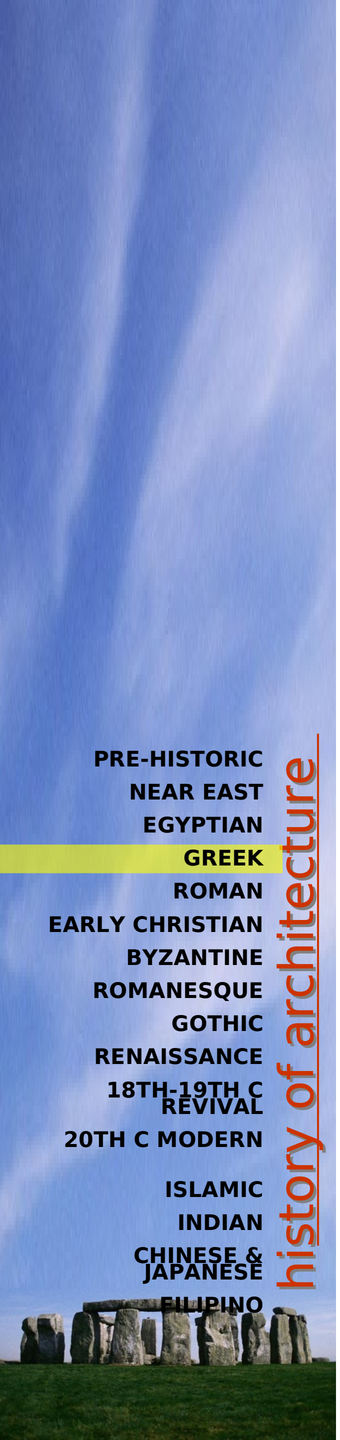
Temple of Nike Apteros, Athens



Temple of Artemis Ephesus



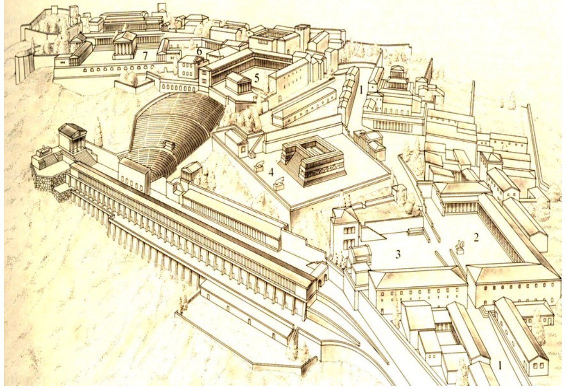
The Erectheion, Acropolis



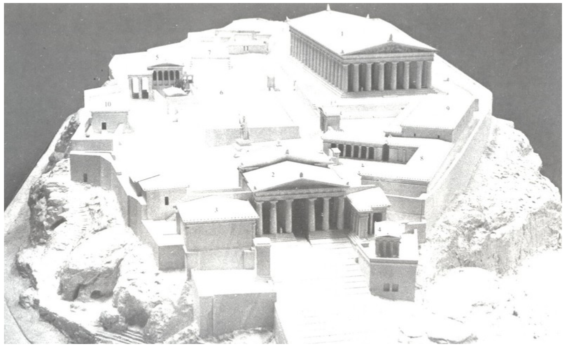
Greek

TEMENOS

- Enclosure designated as a sacred land
- Entire groups of buildings laid out symmetrically and orderly



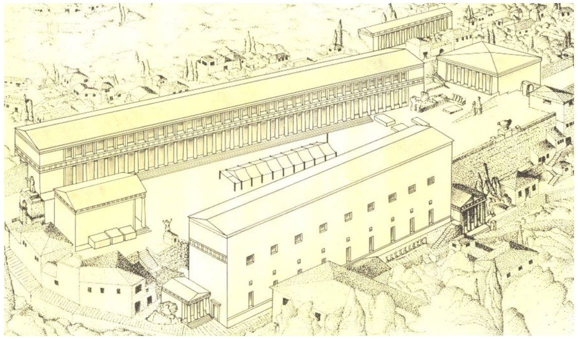
Acropolis at Pergamon



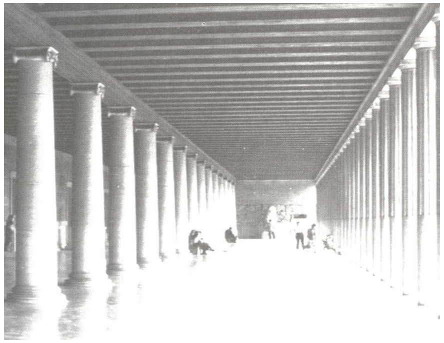
The Acropolis, Athens

10 structures form a world-famous building group:

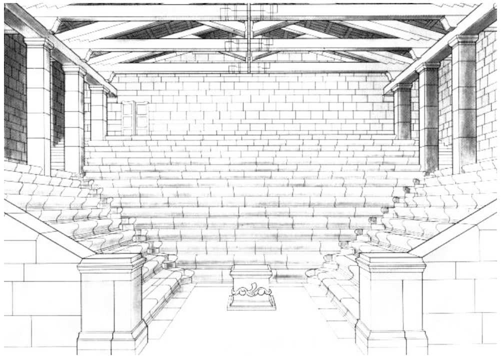
- Propylaea
- Pinacotheca
- Statue of Athena Promachos
- Erectheion
- Parthenon
- Temple of Nike Apteros
- Old Temple of Athena
- Stoa of Eumeses
- Theater of Dionysus
- Odeon of Herodes Atticus



AGORA



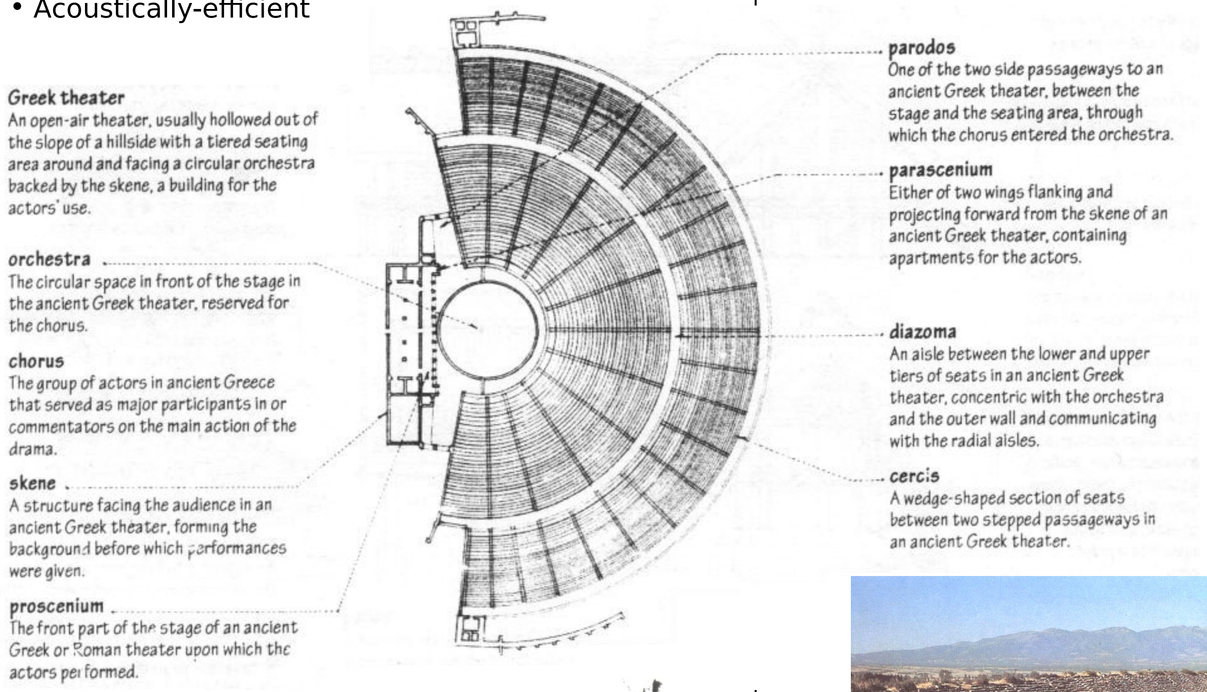
STOA



PRYTANEION, BOULEUTERION, or ASSEMBLY HALL

THEATER or ODEION

- Carved or hollowed out of the hillside
- Acoustically-efficient



Greek theater
An open-air theater, usually hollowed out of the slope of a hillside with a tiered seating area around and facing a circular orchestra backed by the skene, a building for the actors' use.

orchestra
The circular space in front of the stage in the ancient Greek theater, reserved for the chorus.

chorus
The group of actors in ancient Greece that served as major participants in or commentators on the main action of the drama.

skene
A structure facing the audience in an ancient Greek theater, forming the background before which performances were given.

proscenium
The front part of the stage of an ancient Greek or Roman theater upon which the actors performed.

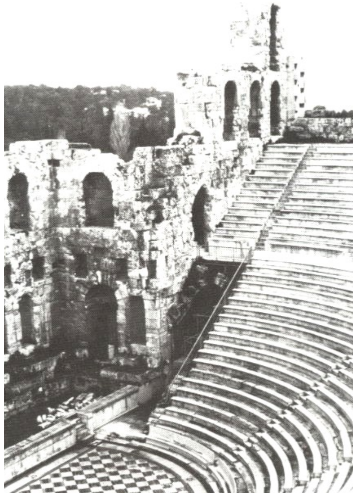
parodos
One of the two side passageways to an ancient Greek theater, between the stage and the seating area, through which the chorus entered the orchestra.

parascenium
Either of two wings flanking and projecting forward from the skene of an ancient Greek theater, containing apartments for the actors.

diazoma
An aisle between the lower and upper tiers of seats in an ancient Greek theater, concentric with the orchestra and the outer wall and communicating with the radial aisles.

cercis
A wedge-shaped section of seats between two stepped passageways in an ancient Greek theater.

Theater of Epidauros



STADIUM or HIPPODROME
PROPYLAEA
PALAESTRA and GYMNASIUM
NAVAL BUILDING
TOMBS/ MAUSOLEUM

Roman

The Historical Timeline of Architecture

Egyptian

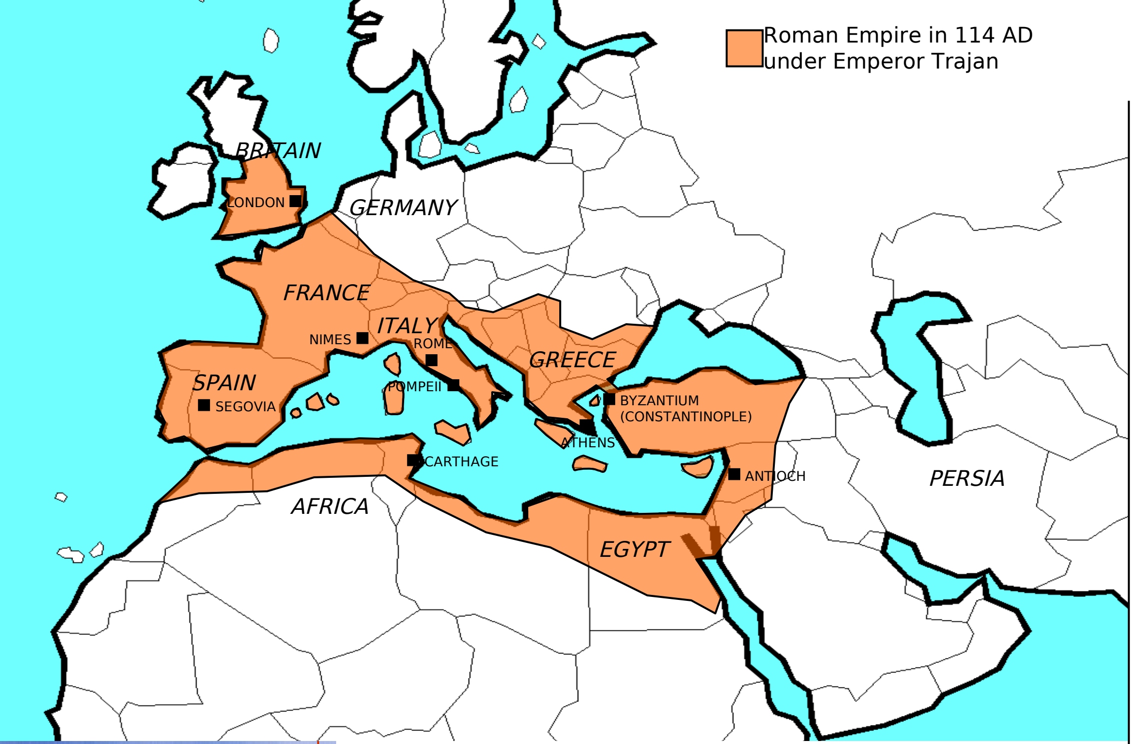
Pre-Historic

Greek

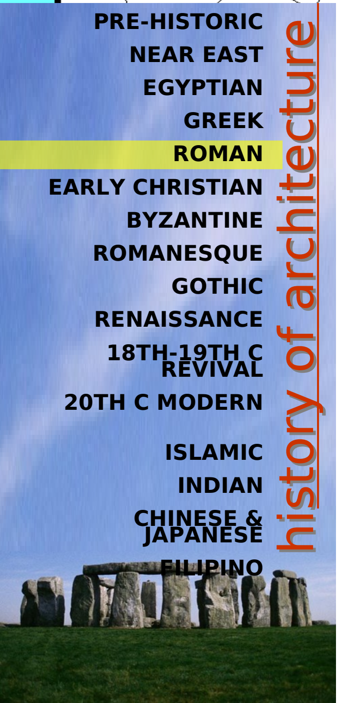
Roman

Near East

Roman



Roman Empire in 114 AD under Emperor Trajan
BRITAIN
LONDON
GERMANY
FRANCE
NIMES
ITALY
ROME
SPAIN
SEGOVIA
POMPEII
GREECE
BYZANTIUM (CONSTANTINOPLE)
ATHENS
CARTHAGE
ANTIOCH
PERSIA
AFRICA
EGYPT



PRE-HISTORIC
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FILIPINO
history of architecture

INFLUENCES

HISTORY

- Many city-states on the Italian peninsula
- From 800 -300 BC, among all cities in Italy, Rome became the most powerful
- 334 – 264 BC, Rome conquered all of Italy and established one of the strongest empires in history

- Was centrally-located on the northern Mediterranean
- Not a sea-faring people
- Depended on conquest by land to extend their power

- Fought with Carthage in North Africa for control of the Mediterranean
- Hannibal led the Carthaginian army and its 38 elephants across the Alps into Rome

2 periods:
Etuscan or Etruscan (750 BC to 146 BC)

Roman (146 BC to 365 AD)
- Developed constitutional republic
- Farmers & soldiers, concerned with efficiency and justice

- For 500 years Rome was ruled by elected leaders called consuls
- In 27 BC, Augustus crowned himself Emperor with total power
- Succession of military dictatorships of which Julius Caesar’s was most famous

- Empire reached its greatest size in 114 AD under Emperor Trajan - 4000km wide and 60 million inhabitants
- Used natural frontiers such as mountain ranges and rivers to define their empire
- Otherwise they built fortified walls, such as Hadrian’s Wall in England

- Provinces run by governors
- Latin was the official language
- Applied roman system of laws
- Was the intermediary in spreading art and civilization in Europe, West Asia and North Africa

Roman

RELIGION
- Polytheistic, several cults
- Roman mythology slowly derived attributes from those of Greek gods

GEOGRAPHY, GEOLOGY and CLIMATE
- Italian peninsula: Central and commanding position on Mediterranean sea

- Temperate in the north
- Sunny in central Italy
- Almost tropical in south

ARCHITECTURAL CHARACTER

DESCRIPTION

- Etruscans were great builders
- Large-scale undertakings, like city walls and sewers
- Draining marshes, controlling rivers and lakes by using channels

- Romans had great constructive ability
- Complex, of several stories
- Utilitarian, practical, economic use of materials

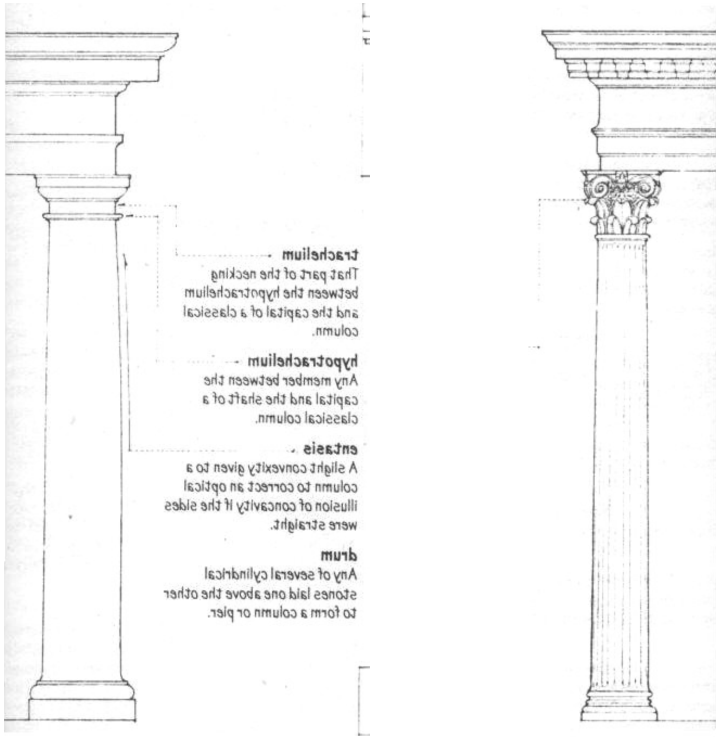
MATERIALS
- Stone: tufa, peperino, travertine, lava stone, sand, gravel
- Marble, mostly white
- Imported marble from all parts of the Empire to river Tiber
- Earth for terra cotta and bricks

- Etruscans introduced the use of concrete (300 AD to 400 AD):
- Stone or brick rubble with pozzolana, a thick volcanic earth material as mortar
- Used for walls, vaults, domes
- Concrete allowed Romans to build vaults of a magnitude never equaled until 19th century steel

COLUMNS
- Orders of architecture, used by Greeks constructively, were used by Romans as decorative features which could be omitted

Tuscan Order
- Simplified version of Doric order
- About 7 diameters high
- With a base, unfluted shaft, moulded capital, plain entablature

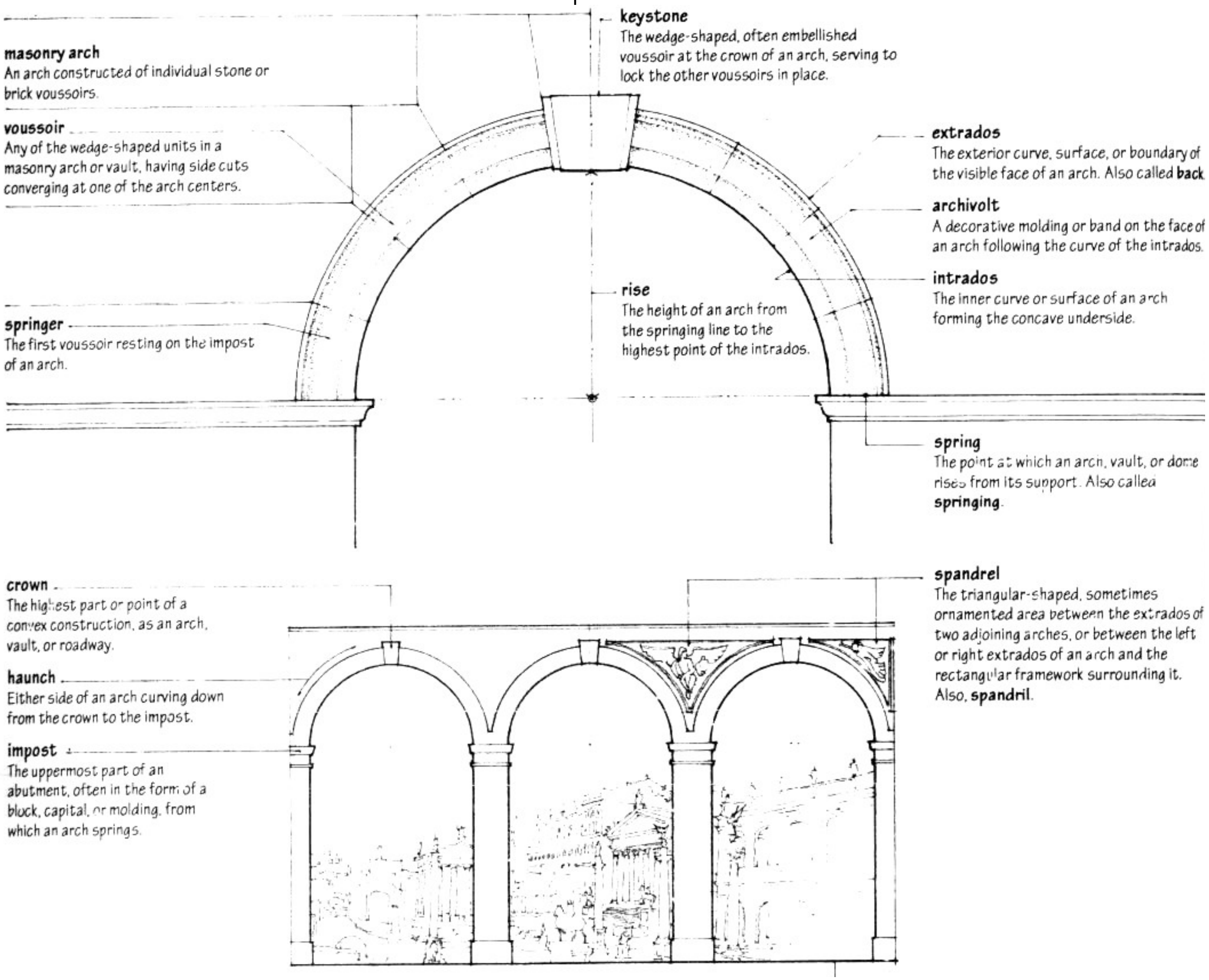
Composite Order
- Evolved in 100 AD, combining prominent volutes of Ionic with acanthus of Corinthian
- Most decorative



Roman

CONSTRUCTION SYSTEM

- Adopted columnar and trabeated style of Greeks
- Arch and vault system started by Etruscans - combined use of column, beam and arch (arctuated)
- Were able to cover large spaces without the aid of intermediate support



masonry arch
An arch constructed of individual stone or brick voussoirs.

voussoir
Any of the wedge-shaped units in a masonry arch or vault, having side cuts converging at one of the arch centers.

springer
The first voussoir resting on the impost of an arch.

keystone
The wedge-shaped, often embellished voussoir at the crown of an arch, serving to lock the other voussoirs in place.

extrados
The exterior curve, surface, or boundary of the visible face of an arch. Also called **back**.

archivolt
A decorative molding or band on the face of an arch following the curve of the intrados.

intrados
The inner curve or surface of an arch forming the concave underside.

rise
The height of an arch from the springing line to the highest point of the intrados.

spring
The point at which an arch, vault, or dome rises from its support. Also called **springing**.

crown
The highest part or point of a convex construction, as an arch, vault, or roadway.

haunch
Either side of an arch curving down from the crown to the impost.

impost
The uppermost part of an abutment, often in the form of a block, capital, or molding, from which an arch springs.

spandrel
The triangular-shaped, sometimes ornamented area between the extrados of two adjoining arches, or between the left or right extrados of an arch and the rectangular framework surrounding it. Also, **spandril**.

Roman

TYPES OF VAULTS

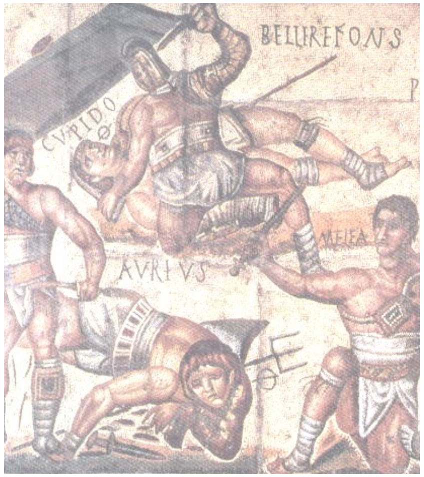
Wagon/ Barrel/ Tunnel Vault:
- Semi-circular or wagon-headed, borne on two parallel walls throughout its length

Wagon Vault with Intersecting Vault:

Cross Vault:
- Formed by the intersection of two semi-circular vaults of equal span - used over square apartment or bays

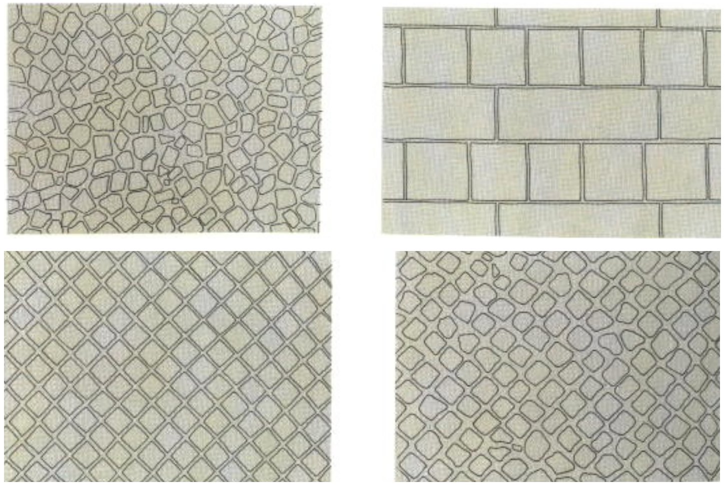
Hemispherical Dome/ Cupola:
- Used over circular structures

DECORATION



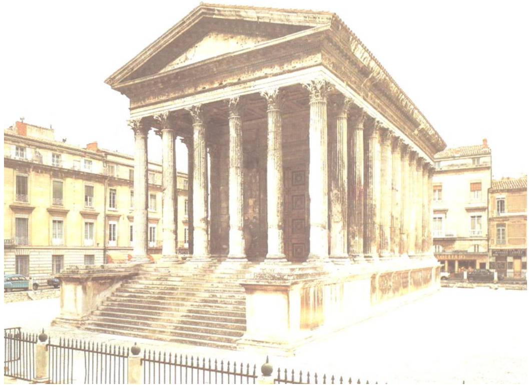
Mosaics
- Thousands of small stones or glass tiles set in mortar to form a pattern
- Showed pictures of roman life

- Opus Incertum - small stones, loose pattern resembling polygonal walling
- Opus Quadratum - rectangular blocks, with or without mortar joints
- Opus Reticulatum - net-like effect, with fine joints running diagonally

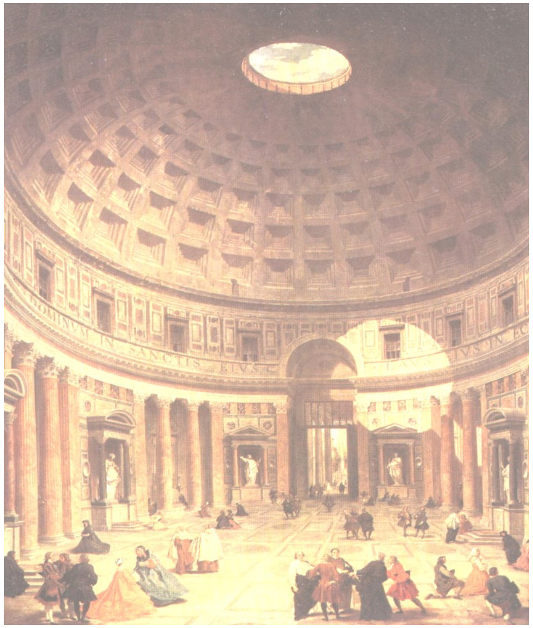


Roman

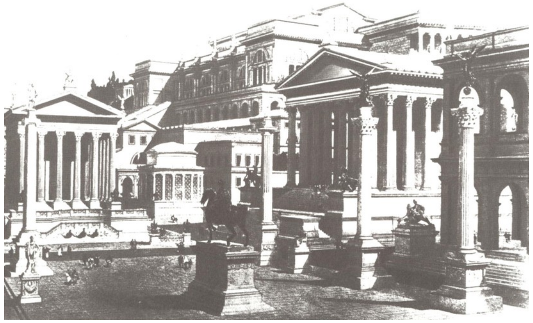
EXAMPLES



RECTANGULAR TEMPLE
Maison Caree, Nimes

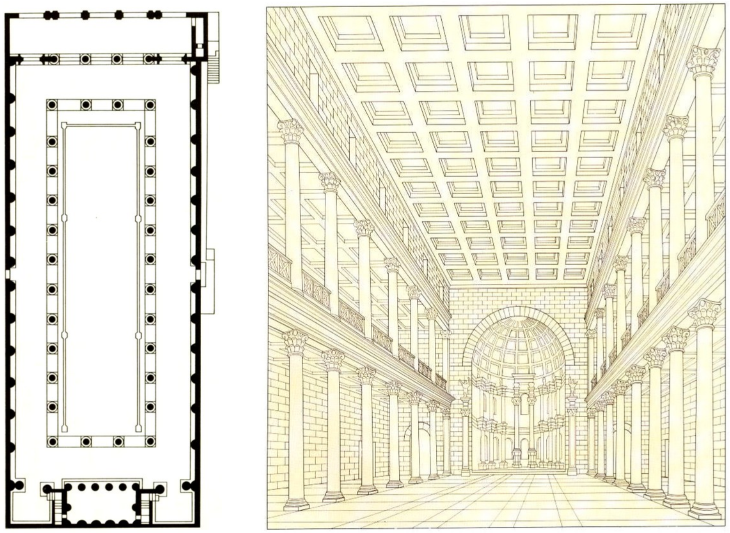


CIRCULAR TEMPLE
The Pantheon. Rome



FORUM

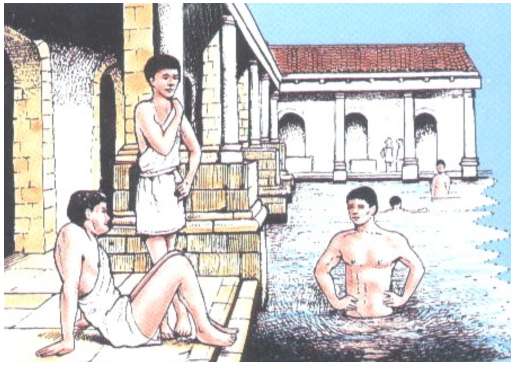
- Roman cities were well-planned with straight streets crossing the town in a grid pattern
- In the town center was an open space called the forum
- Surrounded by a hall, offices, law courts and shops



BASILICAS
Basilica in the Forum, Pompeii
Basilica of Septimius Severus, Lepcis Magna

Roman

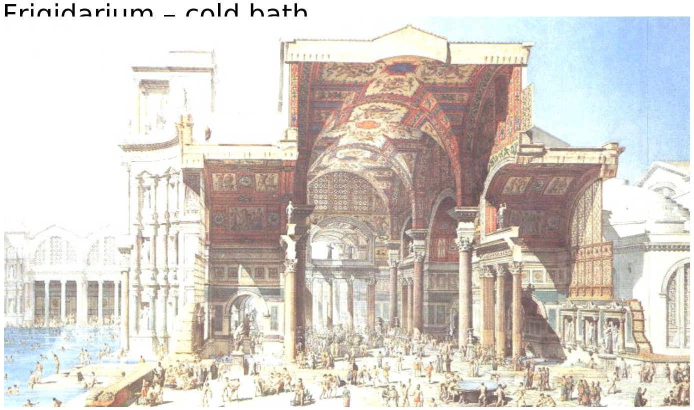
THERMAE



- Romans liked to keep clean and fit
- Built elaborate public baths throughout the empire
- For as many as 30 men and women in the open

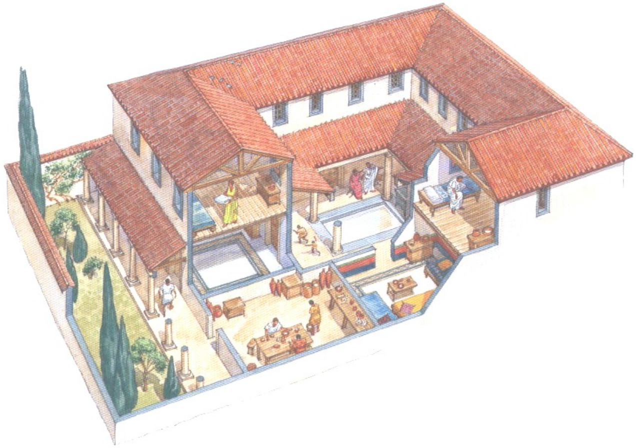
Parts of the thermae

- Apodyteria – dressing room
- Laconicum (sudatorium) - sweat room, rubbing with oil
- Tepidarium – warm bath
- Frigidarium – cold bath
-



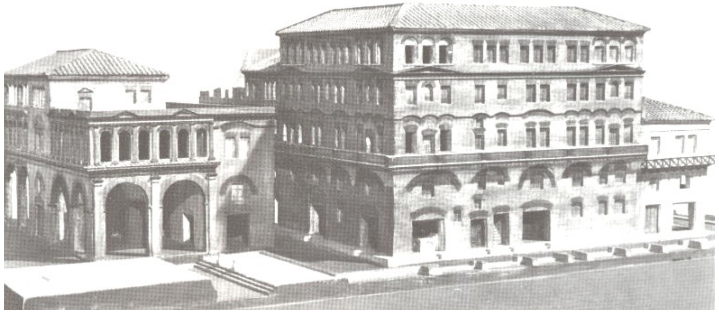
Baths of Diocletian, Rome

DOMUS



INSULAE

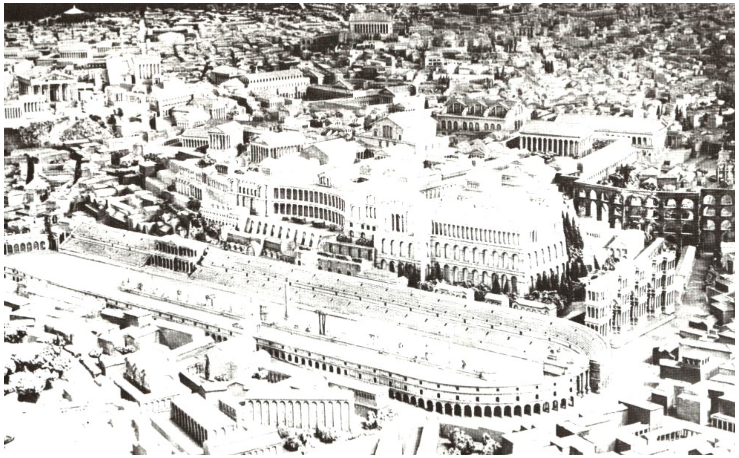
- 3- or 4- storey tenement type buildings
- Prototype for the modern condominium



Roman

CIRCUS

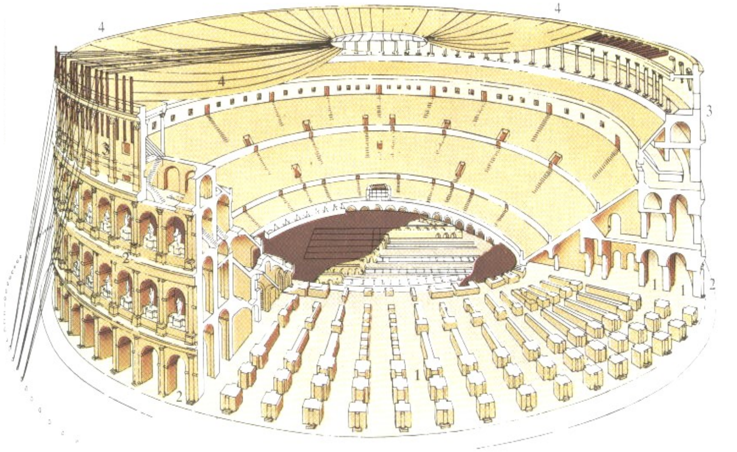
Circus Maximus, Rome



THEATERS and AMPHITHEATERS

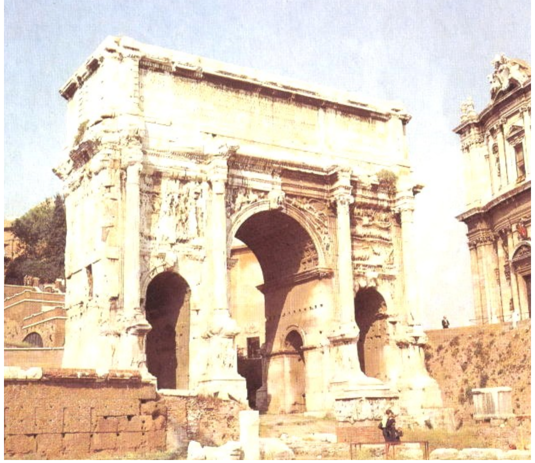
- Gladiators trained to fight each other at organized contests
- For the entertainment of the townspeople

The Colosseum, Rome



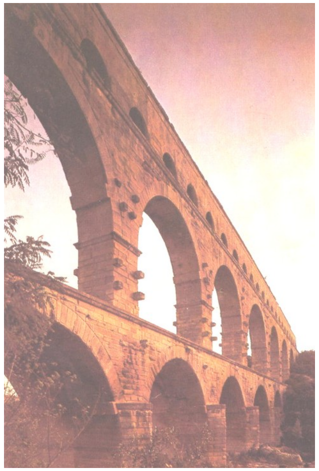
TRIUMPHAL ARCHES

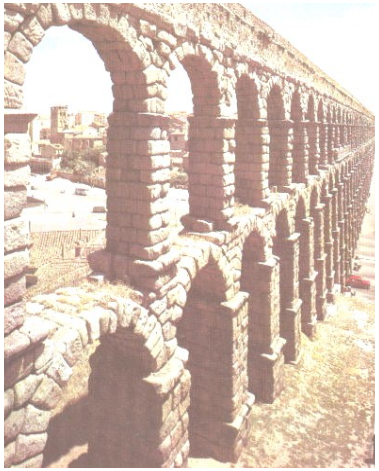
Arch of Septimius Severus, The Forum, Rome



AQUEDUCTS

- Carried water in pipes from the country to the heart of the city





Pont du Gard, Nimes, France
Segovia Aqueduct, Spain

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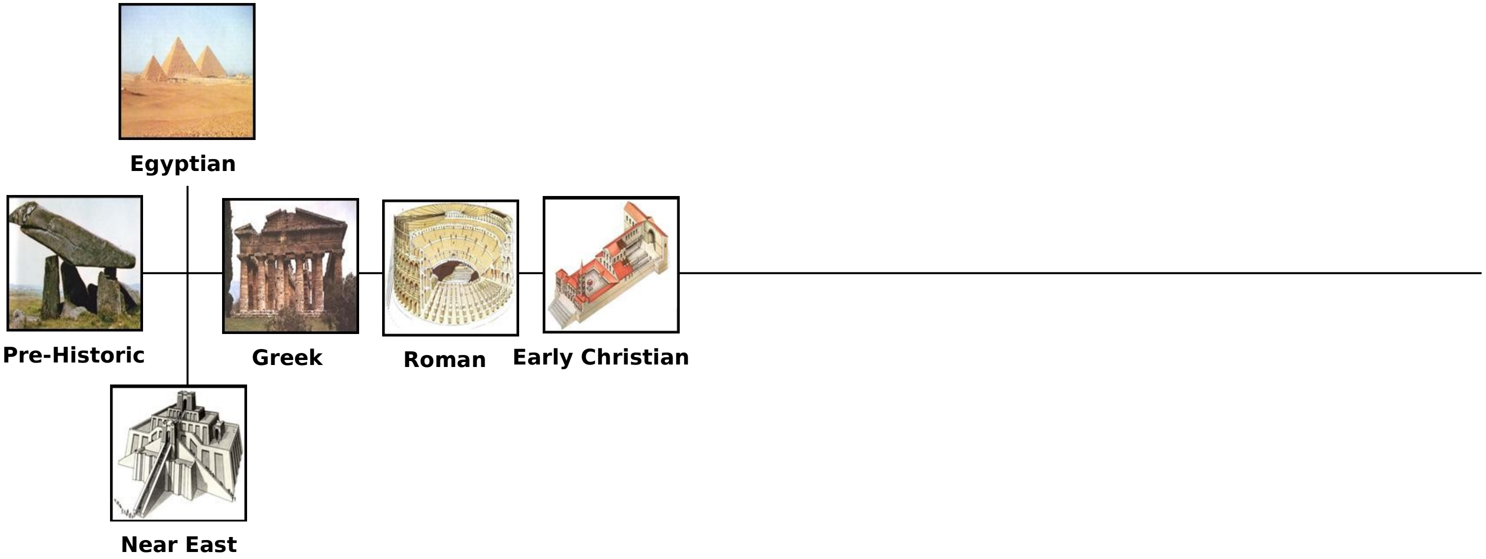
Early Christian

The Historical Timeline of Architecture


Egyptian

Pre-Historic

Greek

Roman

Early Christian

Near East

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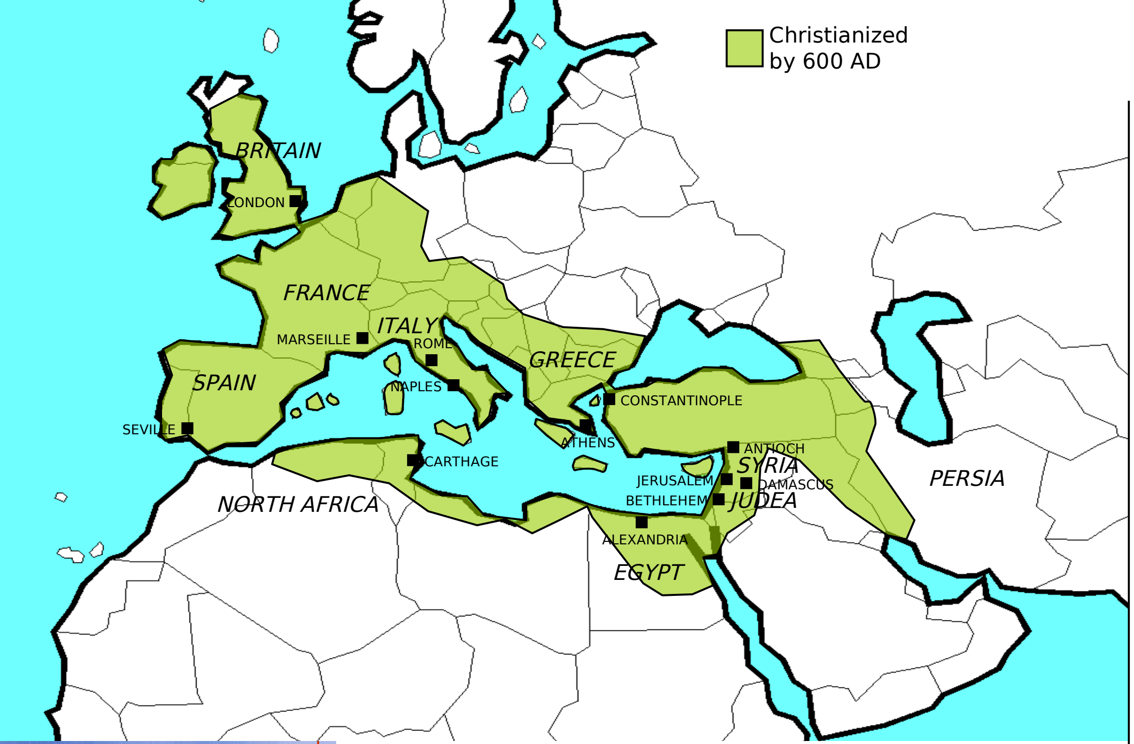
Early Christian


🟩 Christianized by 600 AD
BRITAIN
LONDON
FRANCE
MARSEILLE
ITALY
ROME
NAPLES
SPAIN
SEVILLE
GREECE
CONSTANTINOPLE
ATHENS
CARTHAGE
ANTIOCH
SYRIA
DAMASCUS
JERUSALEM
BETHLEHEM
JUDEA
ALEXANDRIA
EGYPT
NORTH AFRICA
PERSIA

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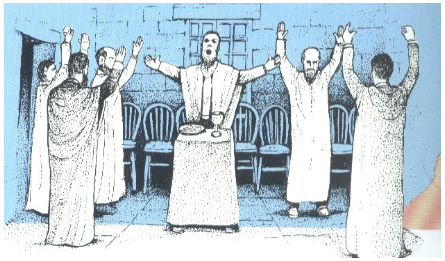
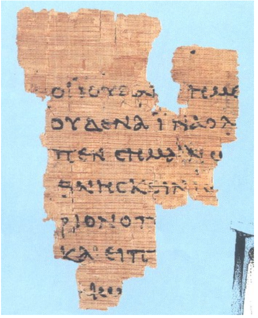
INFLUENCES

HISTORY

- In 63 BC, the Romans conquered Judea in the Eastern Mediterranean
- Main inhabitants were the Jews
- Jews believed that one day the “Messiah” or “Christ” would free them from the Romans

- In 27 AD, Jesus began preaching to people in Galilee, north of Judea
- After three years, he was arrested by the Jews and found guilty of offending their god
- He was nailed to a cross and died a painful death
- He appeared to his disciples after his resurrection from the dead
- Belief that Jesus was the Christ and the Son of God - Christianity was born
- Disciples spread stories of Jesus’ life and teaching by word of mouth and by written account in the new testament



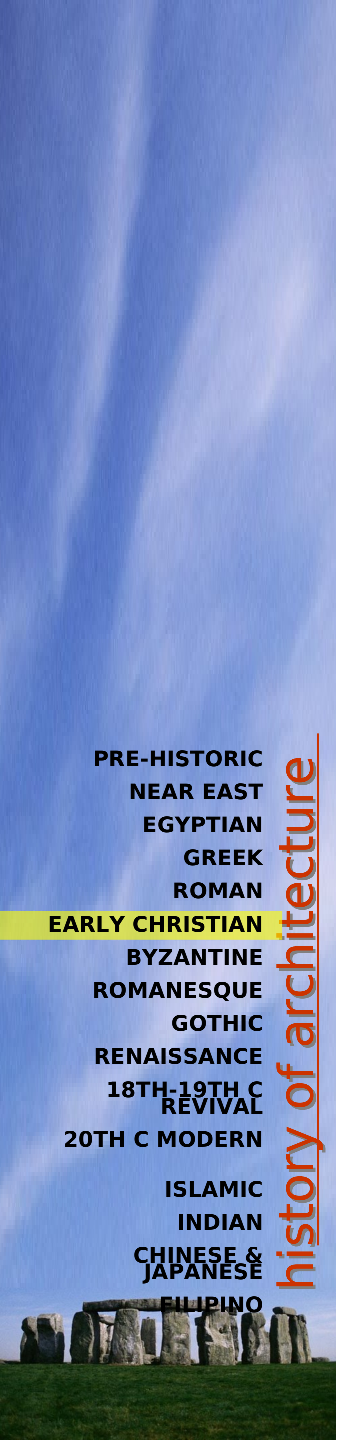


- Moved from Judea to Antioch in Syria and into the Northern Mediterranean
- Founded new communities along the way
- Carried by St. Peter, St. Paul and other missionaries to Rome, the center of the Empire and fountainhead of power and influence
- Emperor Nero ordered Christians to be fed to wild beasts or burned to death

- Despite this, in 4th century Rome, Christianity grew
- In 312 AD, Constantine, a converted Christian, named it the official religion of the Roman empire
- By 600 AD, most roman villages had their own churches, governed by a bishop
- Patriarchs based in Jerusalem, Alexandria, Antioch, Constantinople and Rome

GEOGRAPHY & GEOLOGY

- Ruins of Roman buildings served as quarries from which materials were obtained



Early Christian

ARCHITECTURAL CHARACTER

DESCRIPTION

- Highly-influenced by Roman art and architecture
- This architecture hardly has the architectural value of a style, simply because it was never really produced by the solution of constructive problems

ROOF and CEILING

- Further development of trusses - king and queen post trusses

EXAMPLES

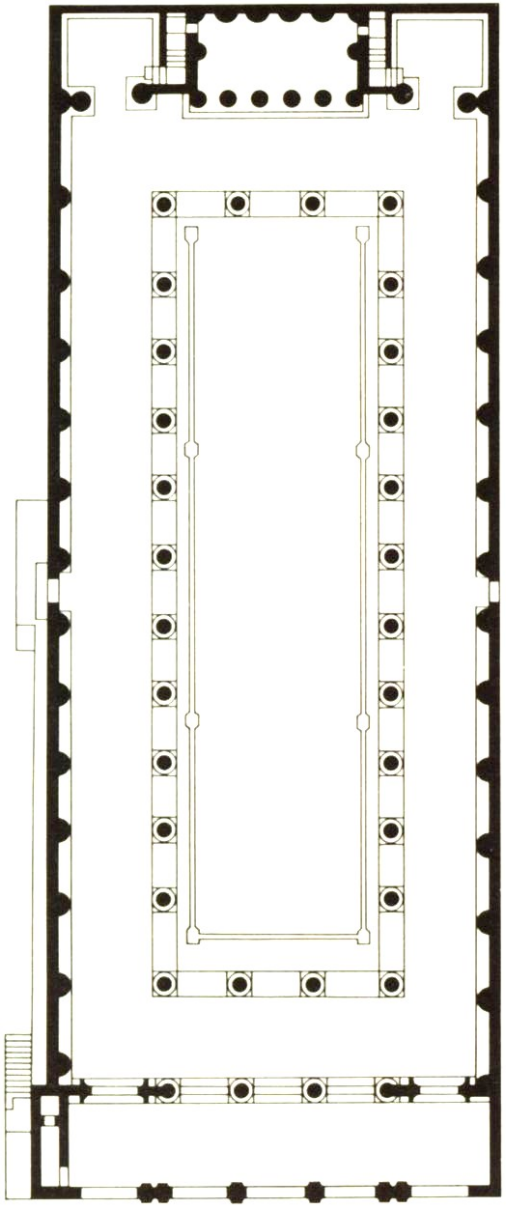
BASILICAN CHURCHES

- Roman basilicas as models
- Usually erected over the burial place of the saint to whom it was dedicated
- Unlike Greek and Roman temples which sheltered gods, the purpose of the Christian church was to shelter worshippers

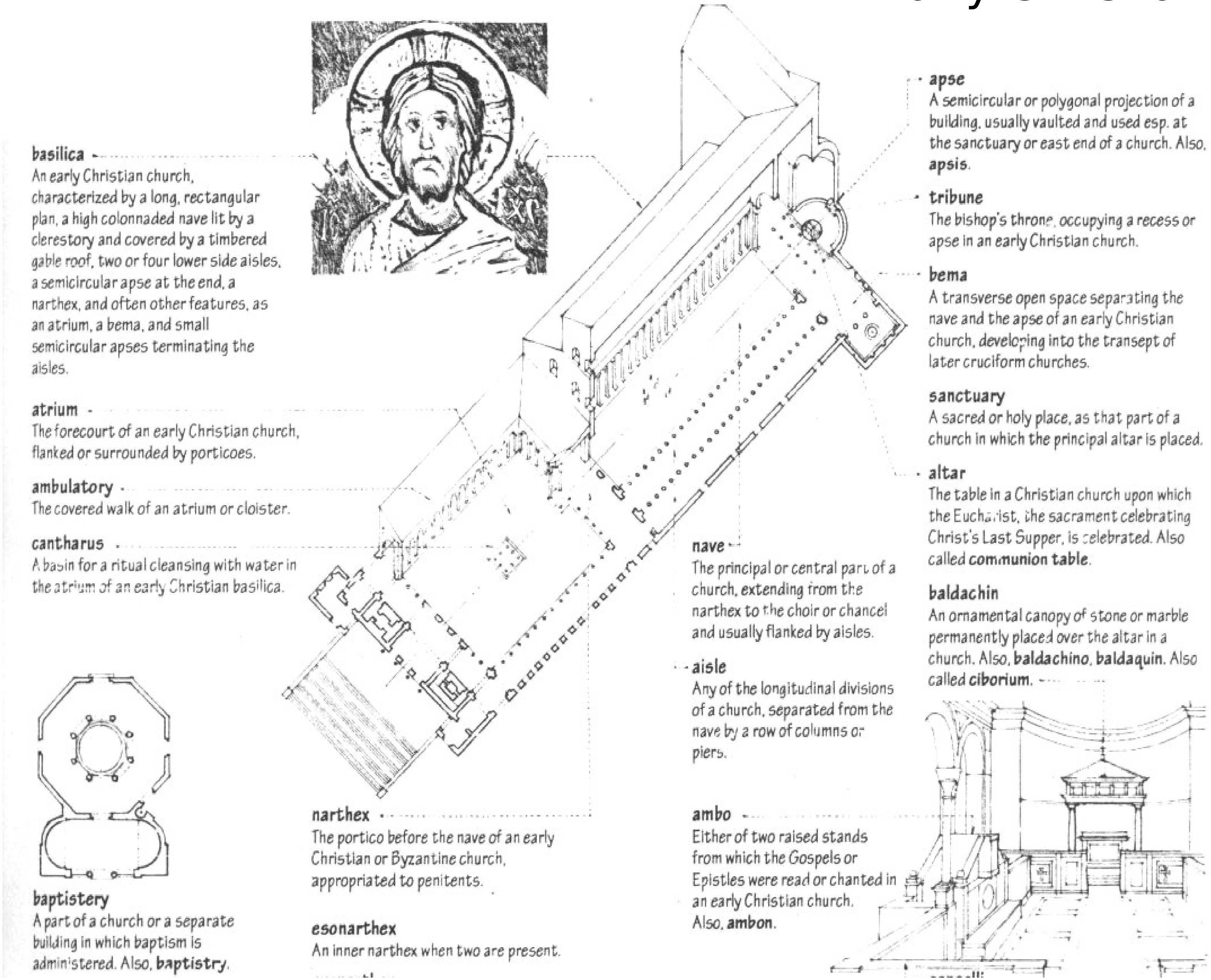
- Came in a complex, with cathedral, belfry or campanile, and baptistery

- Fine sculptures and mosaics worked into new basilicas
- Paid little regard to external architectural effect

- Entrance at west
- Priest stood behind altar, facing east



Early Christian



basilica
An early Christian church, characterized by a long, rectangular plan, a high colonnaded nave lit by a clerestory and covered by a timbered gable roof, two or four lower side aisles, a semicircular apse at the end, a narthex, and often other features, as an atrium, a bema, and small semicircular apses terminating the aisles.

atrium
The forecourt of an early Christian church, flanked or surrounded by porticoes.

ambulatory
The covered walk of an atrium or cloister.

cantharus
A basin for a ritual cleansing with water in the atrium of an early Christian basilica.

baptistery
A part of a church or a separate building in which baptism is administered. Also, **baptistry**.

narthex
The portico before the nave of an early Christian or Byzantine church, appropriated to penitents.

esonarthex
An inner narthex when two are present.

nave
The principal or central part of a church, extending from the narthex to the choir or chancel and usually flanked by aisles.

aisle
Any of the longitudinal divisions of a church, separated from the nave by a row of columns or piers.

ambo
Either of two raised stands from which the Gospels or Epistles were read or chanted in an early Christian church. Also, **ambon**.

apse
A semicircular or polygonal projection of a building, usually vaulted and used esp. at the sanctuary or east end of a church. Also, **apsis**.

tribune
The bishop's throne, occupying a recess or apse in an early Christian church.

bema
A transverse open space separating the nave and the apse of an early Christian church, developing into the transept of later cruciform churches.

sanctuary
A sacred or holy place, as that part of a church in which the principal altar is placed.

altar
The table in a Christian church upon which the Eucharist, the sacrament celebrating Christ's Last Supper, is celebrated. Also called **communion table**.

baldachin
An ornamental canopy of stone or marble permanently placed over the altar in a church. Also, **baldachino**, **baldaquin**. Also called **ciborium**.

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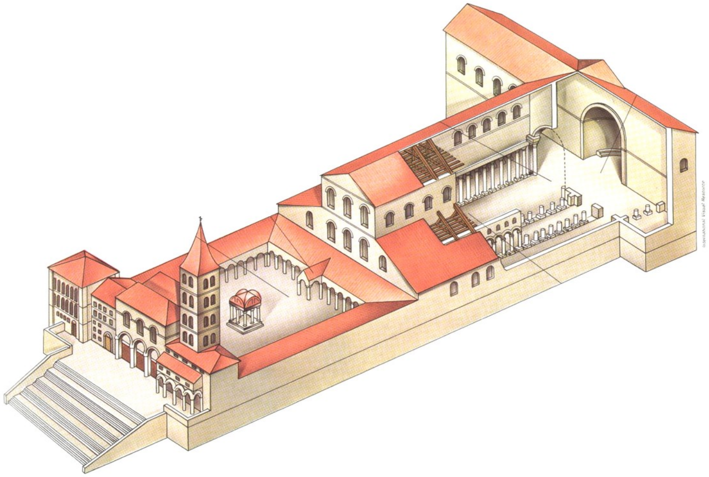
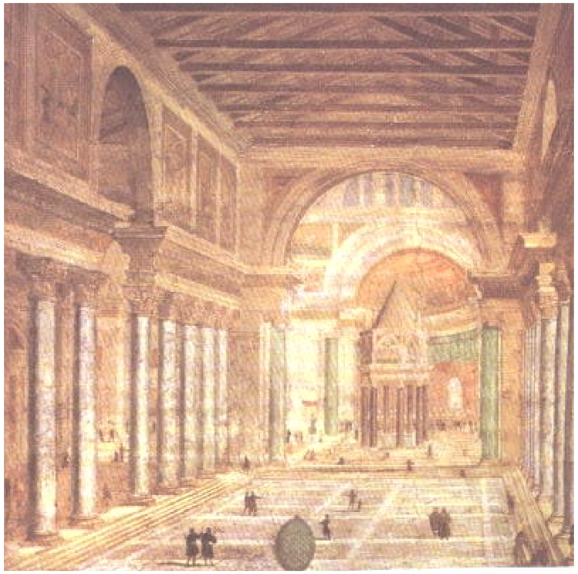
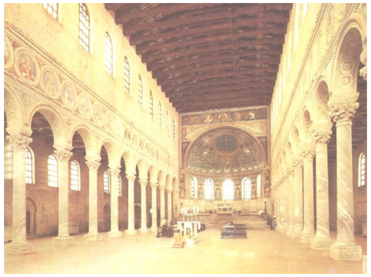
Early Christian

St. Peter's, Rome
- Erected by Constantine near the site of St. Peter's martyrdom
- The Circus of Nero was torn down to erect it





Other examples:
S. Apollinare, Ravenna
S. Sabina
S. Agnese Fuori Le Mura, Rome
St. Paulo Fuori Le Mura
S. Clemente, Rome
S. Maria Maggiore, Rome



Early Christian

BAPTISTERIES

- Used only for sacrament of baptism, on festivals of Easter, Pentecost and Epiphany
- Large separate building from church, sometimes adjoined atrium

TOMBS or CATACOMBS

- Christians objected to cremation, insisted on burial on consecrated ground
- Land for burials had become scarce and expensive

- Monumental tombs became expressions of faith in immortality
- Cemeteries or catacombs were excavated below ground
- Several stories extending downwards

- Usually domed and enriched with lavish mosaic decorations
- Walls and ceilings were lavishly decorated with paintings mixing pagan symbolism with scenes

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Byzantine

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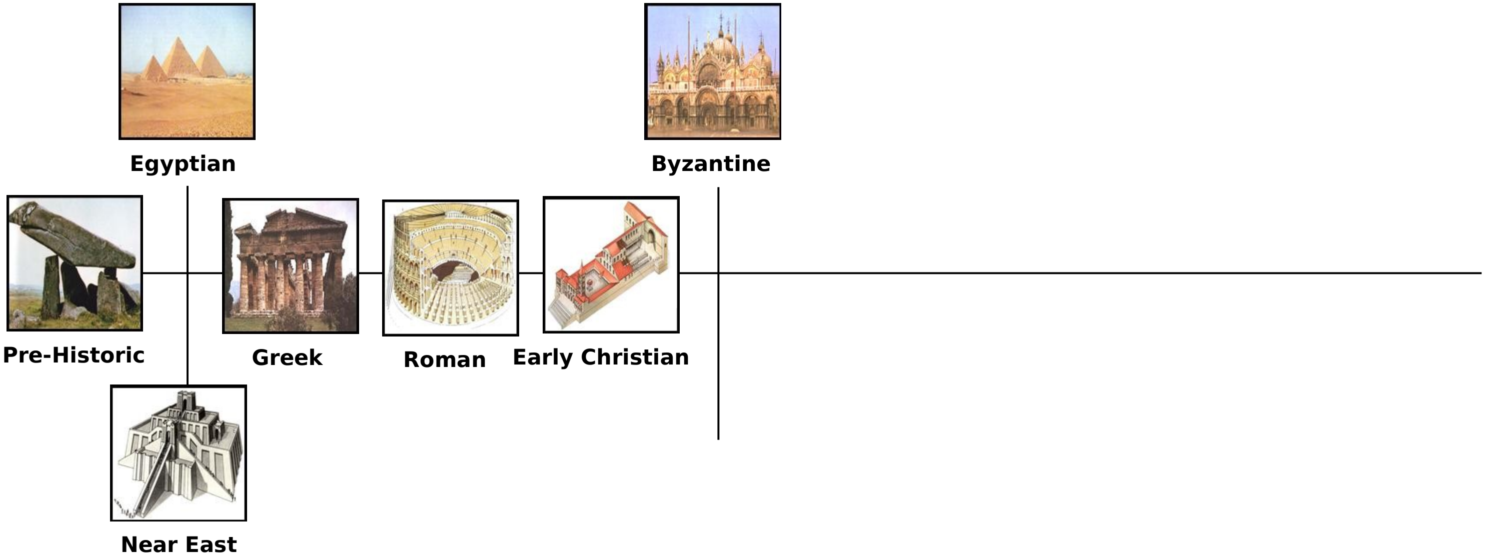


Egyptian

Byzantine

Pre-Historic

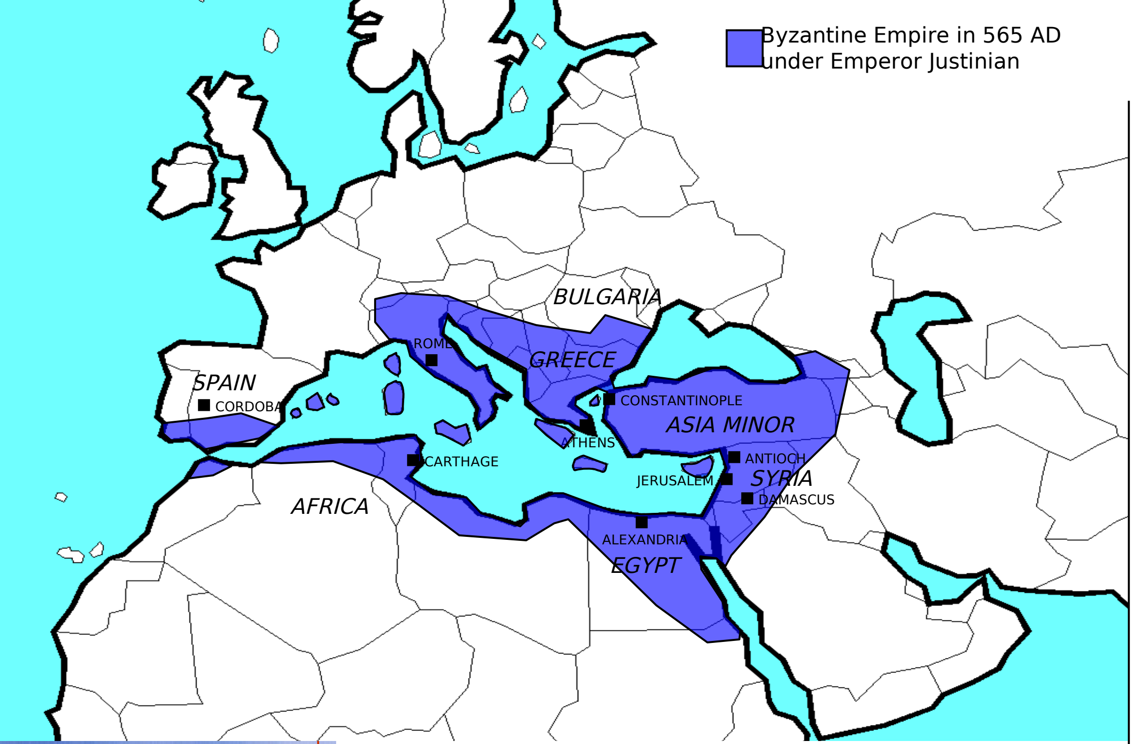
Greek

Roman

Early Christian

Near East

Byzantine


Byzantine Empire in 565 AD
under Emperor Justinian
BULGARIA
ROME
GREECE
SPAIN
CORDOBA
CONSTANTINOPLE
ASIA MINOR
ATHENS
CARTHAGE
ANTIOCH
JERUSALEM
SYRIA
DAMASCUS
AFRICA
ALEXANDRIA
EGYPT

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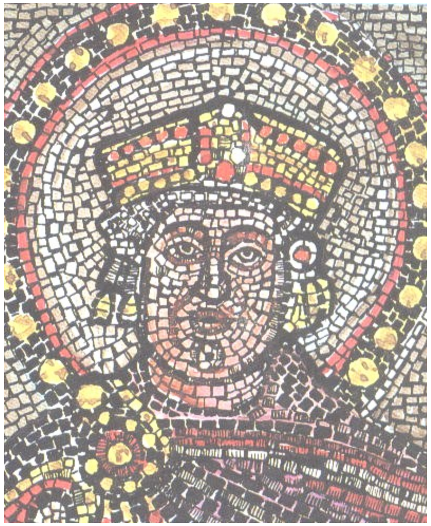
INFLUENCES

HISTORY

- Fierce barbaric tribes such as the Goths and Vandals attacked from outside the empire
- In 285 – 293 AD, the empire had split into two – an Eastern and Western empire
- Constantine, a converted Christian, changed the capital of the Empire from Rome to Constantinople in 330 AD
- The western empire based in Rome finally collapsed in 476 AD
- Eastern empire lasted another thousand years and was known as the Byzantine empire

- Constantinople stood on the site of an old Greek town called Byzantium (present-day Istanbul)
- Known as the "new Rome", most commanding position and most valuable part of eastern Roman empire
- Bulwark of Christianity during the Middle A

- Strongly Christian people - founded many monasteries and churches
- Converted the Russians and Eastern Europeans to Christianity - this form of Christianity survives today as the Eastern Orthodox Church



- Under Emperor Justinian, regained control of lost lands of the Western Roman Empire, such as Northwest Africa, Italy and Spain
- Attacks from Slav Barbarians and Bulgars from the northwest were constantly being repelled
- Persians, Arabs and Muslims from east
- Normans and Venetians
- Ottoman Turks captured the city in 1453 and killed Constantine XI the last emperor

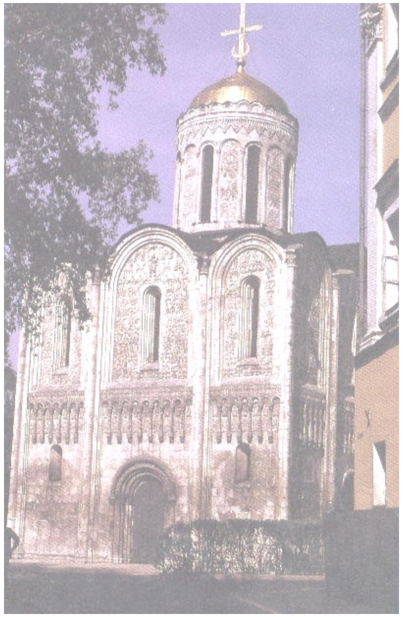
GEOGRAPHY & GEOLOGY

- Where Asia and Europe meet, separated by a narrow strip of water
- Art and architecture executed by original Greek craftsmen
- Influence reached Greece, Serbia, Russia, Asia Minor, North Africa, further west
- Also Ravenna, Perigeux and Venice, through trade

Byzantine

ARCHITECTURAL CHARACTER

DESCRIPTION
- First buildings constructed were churches
- Dumped Early Christian style for new domical Byzantine style
- Byzantine is still official style for Orthodox church



distinction:
- Basilican plan - Early Christian
- Domed, centralized plan - Byzantine

CONSTRUCTION SYSTEM
- Fusion of domical construction with classical columnar style
- Domes of various types placed over square compartments using pendentives
- Semi-circular arches rest directly on columns, with capitals able to support springing of arches

DOMES
- The dome was the prevailing motif of Byzantine architecture
- Practice of using domes contrasts with Early Christian timber truss system

3 types of dome:

Simple - Pendentives and domes are of same sphere

Compound
- Dome of separate sphere, rises independently over sphere of pendentives or dome raised on high drum

Special designs: melon, serrated, onion or bulbous shape

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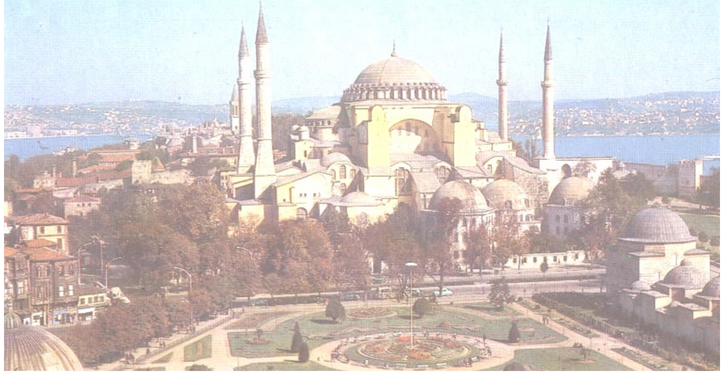
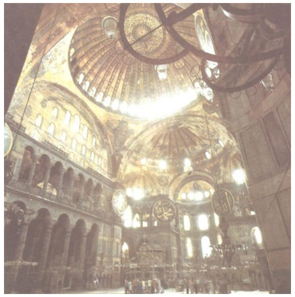
Byzantine

EXAMPLES

CHURCHES

- Centralized type of plan
- Dome over nave, sometimes supported by semi-domes
- Entrance at west





S. Sophia, Constantinople

- Hagia Sophia "divine or holy wisdom"
- Built by Justinian, designed by Anthemius of Tralles and Isidorus of Miletus
- Rose on the site of 2 successive Basilican churches of the same name

- Most important church in Constantinople
- Perfection of Byzantine style

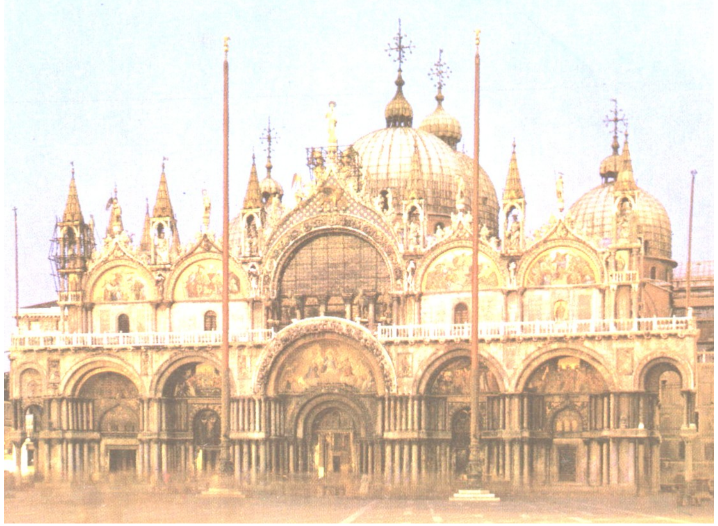
- Later converted into a mosque

S. Mark, Venice

- On the site of original Basilican church
- An exterior quality all its own: blending of features from many foreign lands

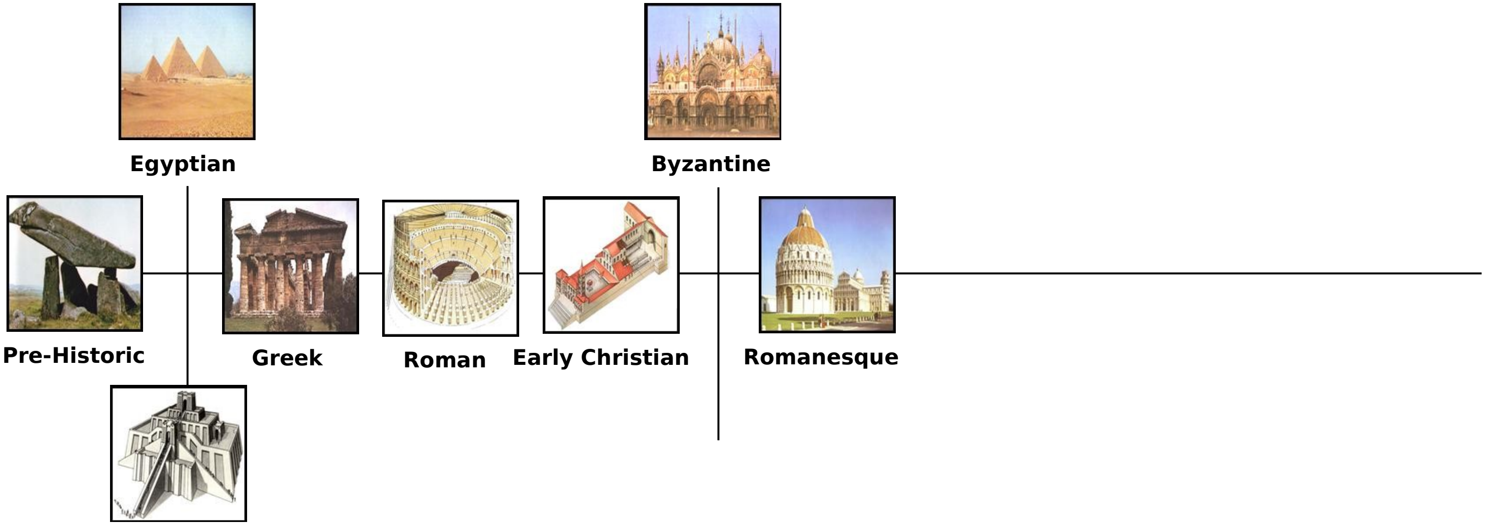
- Sits behind the Piazza of San Marco, vast marble-paved open space serves as atrium to church

- Glittering, resplendent façade
- Exterior enriched by fine entrance portals, mosaic and marble decorations



Romanesque

The Historical Timeline of Architecture



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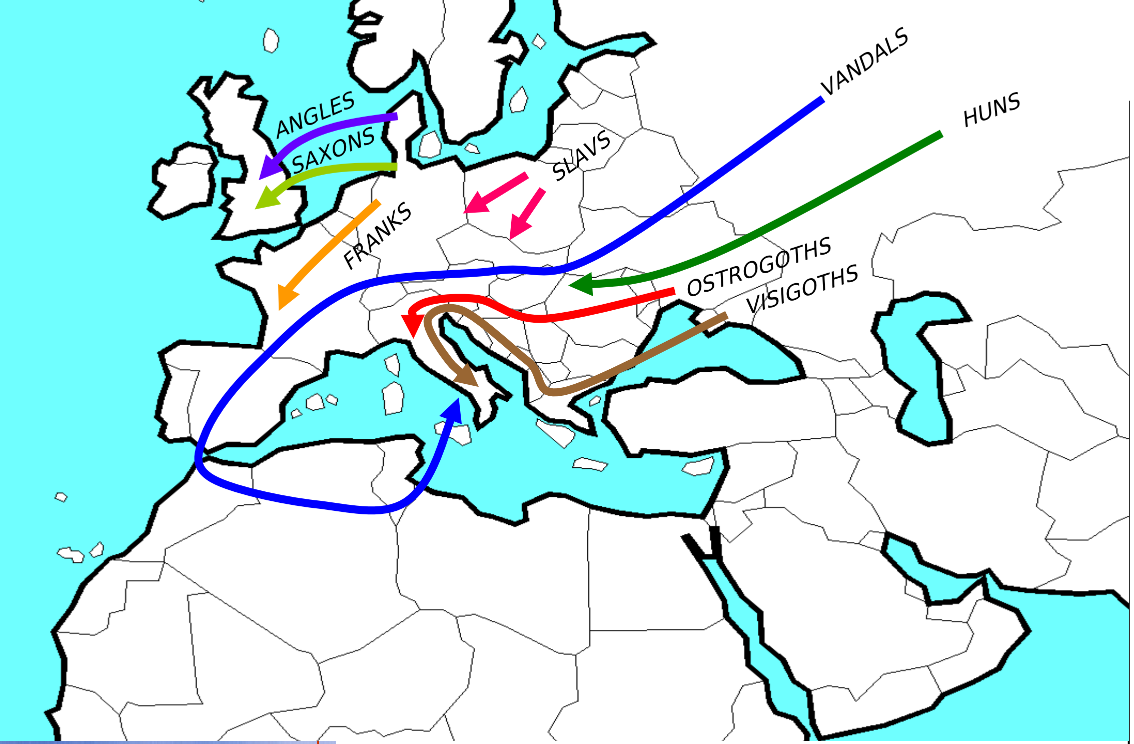

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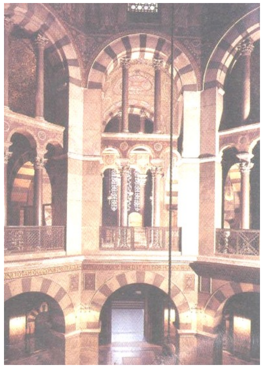
INFLUENCES

HISTORY

- The Roman Empire was halved into East and West
- Those outside the Empire were called "barbarians" - German tribes such as the Franks, Saxons, Vandals, Goths; Asian tribes such as the Huns
- 4th century, Huns invaded Europe forcing the Goths and Vandals to seek shelter inside the Roman Empire
- Rome agreed to let them stay in exchange for help against the Huns

- In 410 AD, Alaric the Goth seized Rome, settled in Spain
- Ostrogoths held much of Italy, Vandals moved across Europe into Africa
- 486 – 507, Clovis, King of the Franks, conquered

- The decline of the Roman Empire led to the rise of independent states and nations across Europe
- Most states still had ecclesiastical and political ties to Rome
- This went on for three centuries, from 500 to 800 AD



- Charlemagne, a Frankish Carolingian king, was barbarian Europe's most effective ruler
- In 800 AD, he was crowned Emperor by Pope Leo III -
- established the Holy Roman Empire, tried to be as grand as the Roman and Byzantine emperors before him
- Built his palace in Aachen, based on Byzantine palace and chapel in Constantinople
- Conquered parts of Germany, Austria, Italy and Spain

- Art and civilization was restored over Europe
- There was a new religious enthusiasm:
- The crusades were conducted against Muslims
- Papacy rose to great power
- Great monastic foundations
- Christianity was source of education, culture, and economy

- In 814 AD, Charlemagne's empire began to break up splitting into 3 kingdoms
- Vikings from Norway, Denmark and Sweden

Romanesque

RELIGION
- Rise of the religious orders
- Science, letters, art and culture were the monopoly of orders
- Gave impulse to architecture; fostered art and learning

ARCHITECTURAL CHARACTER

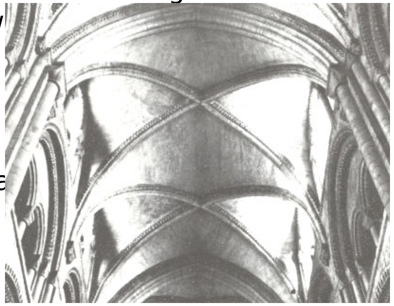
DESCRIPTION
- Religious fervor expressed in:
- Art, cathedrals and monastic buildings

- Architecture spread throughout Europe but governed by classical traditions – “Romanesque”

- Ruins of classical buildings - classical precedent was used only to suit the fragments of old ornaments used in new

EXAMPLES

CATHEDRALS
- Mostly Basilican in pla



- Rib and Panel vaulting - framework of ribs support thin stone panels

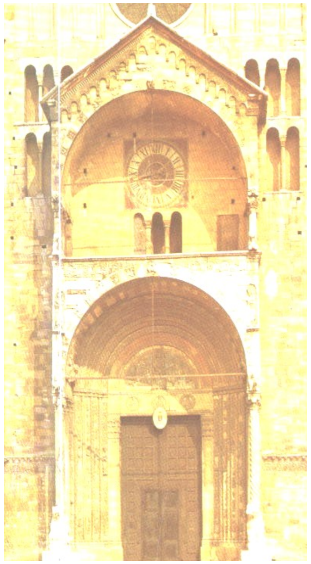
BAPTISTERIES
- Large, separate buildings usually octagonal in plan and connected to the cathedral by the atrium
- Used 3 times a year: Easter, Pentecost, Epiphany

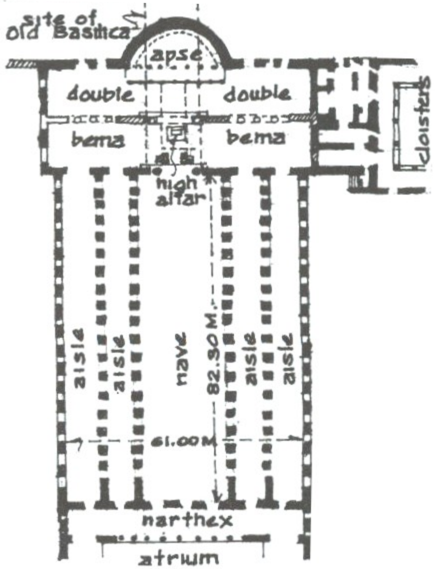
CAMPANILES
- Straight towers shafts, generally standing alone
- Served as civic monuments, symbols of power, watch towers

NORTHERN ITALY
- Milan, Venice, Ravenna, Pavia, Verona, Genoa - cities competed to construct glorious buildings
- Links to Northern Europe (through alpine passes) and Constantinople (through Venice and Ravenna)

- Ornamental arcades all over façade
- Wheel window
- Central projecting porch, with columns on roughly-carved grotesque figures of men and beasts (shows Northern European influence)

S. Ambrogio, Milan
S. Zeno Maggiore, Verona
S. Fedele, Como
S. Michele, Pavia





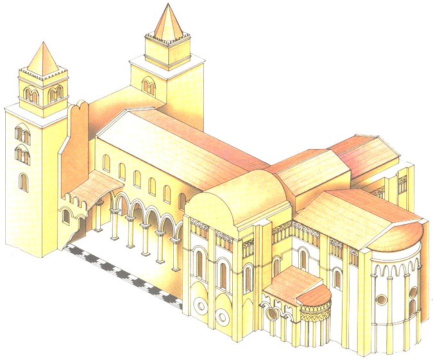
Romanesque

SOUTHERN ITALY

- Underwent Greek, Roman, Byzantine, Muslim and Norman rule

- Richer in design and color
- Elaborate wheel windows – made of sheets of pierced marble
- Greater variety in columns and capitals
- Elaborate bronze doors and bronze pilasters

- Byzantine influence: mosaic decorations, no vaults, used domes
- Muslim influence: use of striped marbles, stilted pointed arches, colorful, geometric designs as predomina



Cefalu Cathedral, Sicily

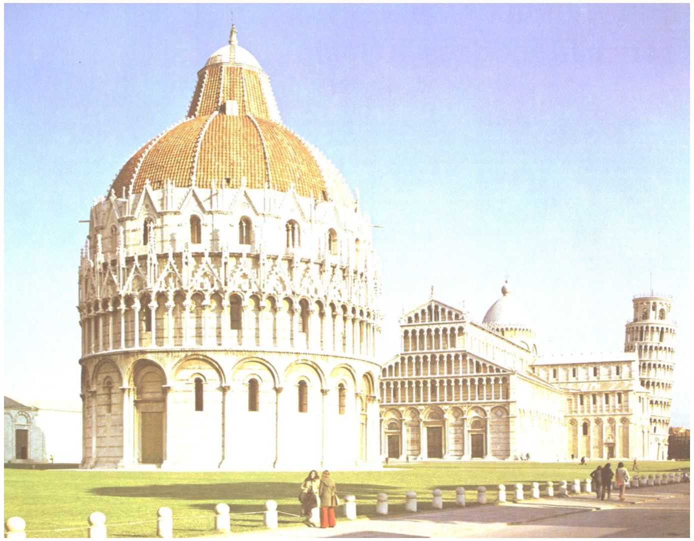
- Most distinct Romanesque church in Sicily

Monreale Cathedral

- Most splendid under Norman rule in Sicily
- Basilican and Byzantine planning

CENTRAL ITALY

- Rome, Florence, Naples, Pisa – cities rich in pagan influence
- Pisa had commercial links with the Holy Land; fought with Muslims
- Great stone and mineral wealth, brilliant atmosphere



Pisa Cathedral

- Forms one of most famous building groups in the world - Cathedral, Baptistery, Campanile, and Campo Santo
- Resembles other early Basilican churches in plan
- Exterior of red and white marble bands

Baptistery

- 39.3 m circular plan by Dioti Salvi

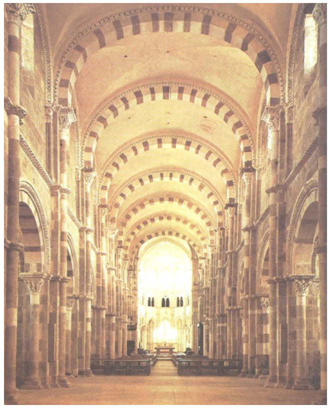
Campanile

- aka The “Leaning Tower of Pisa”
- 8 storeys, 16 m in diameter
- Due to failure of foundations, overhangs 4.2 m

Romanesque

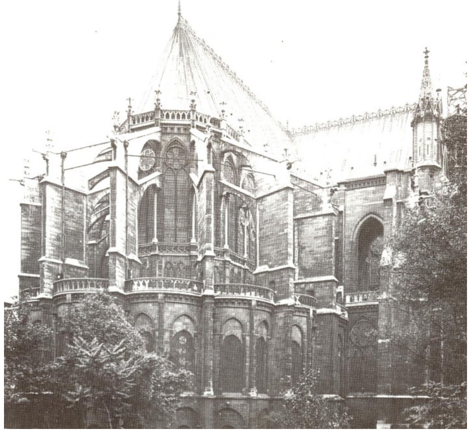
FRANCE

- Remains of old buildings were less abundant – they had greater freedom of developing new style
- Rib-vaults and semi-circular or pointed arches over the nave and aisles
- Timber-framed roofs of slate finish and steep slope to throw off snow



S. Madeleine, Vezelay

- Earliest pointed cross-vault in France



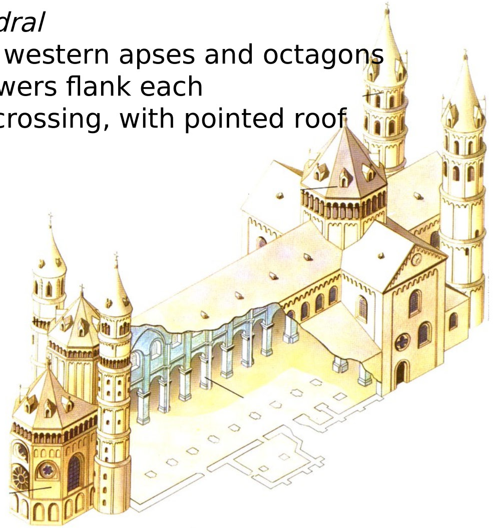
Abbey of St. Denis, near Paris

- Among the first instances of using the pointed arch
- Ribbed vault, pointed arch and flying buttresses successfully combined

CENTRAL EUROPE

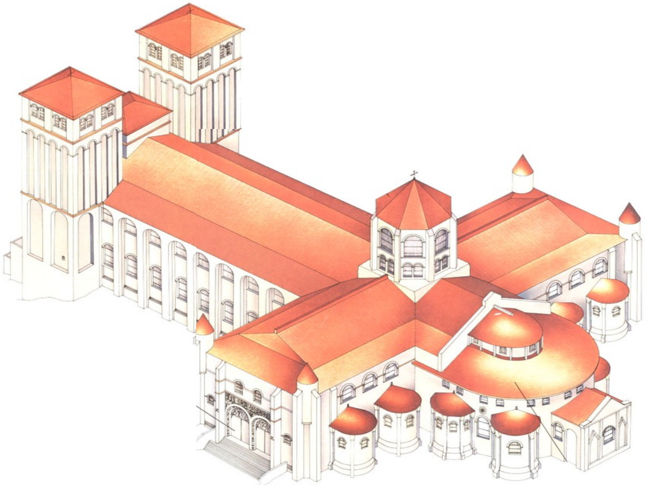
Worms Cathedral

- Eastern and western apses and octagons
- 2 circular towers flank each
- Octagon at crossing, with pointed roof



SPAIN

- Use of both Basilican and Greek-cross forms
- Use of horseshoe arch



Santiago de Compostela

- Finest achievement of Romanesque in Spain

Romanesque

PRE-HISTORIC
NEAR EAST
EGYPTIAN
GREEK
ROMAN
EARLY CHRISTIAN
BYZANTINE
ROMANESQUE
GOTHIC
RENAISSANCE
18TH-19TH C REVIVAL
20TH C MODERN
ISLAMIC
INDIAN
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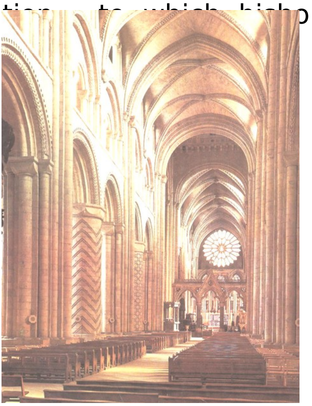
FILIPINO
history of architecture

ENGLAND

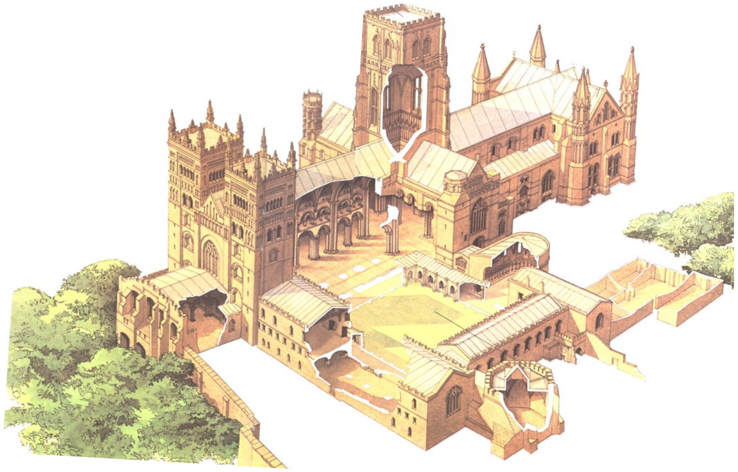
3 foundations:

- Old foundation - served by secular clergy
- Monastic foundation - served by regular clergy or monks
- New foundation - to which bishops had been appointed



Peterborough Cathedral

- Norman interior

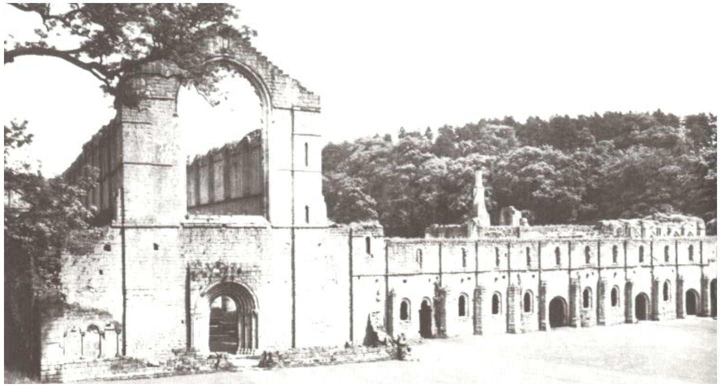


Durham Cathedral

- Rib and panel vaulting with pointed arches

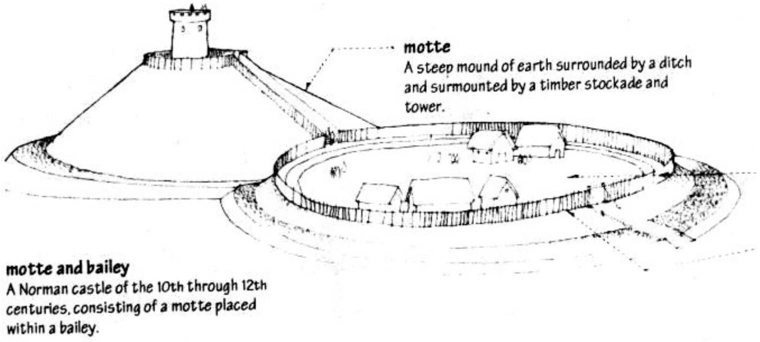
MONASTIC BUILDINGS

Fountains Abbey, Yorkshire



FORTIFICATIONS & TOWN WALLS

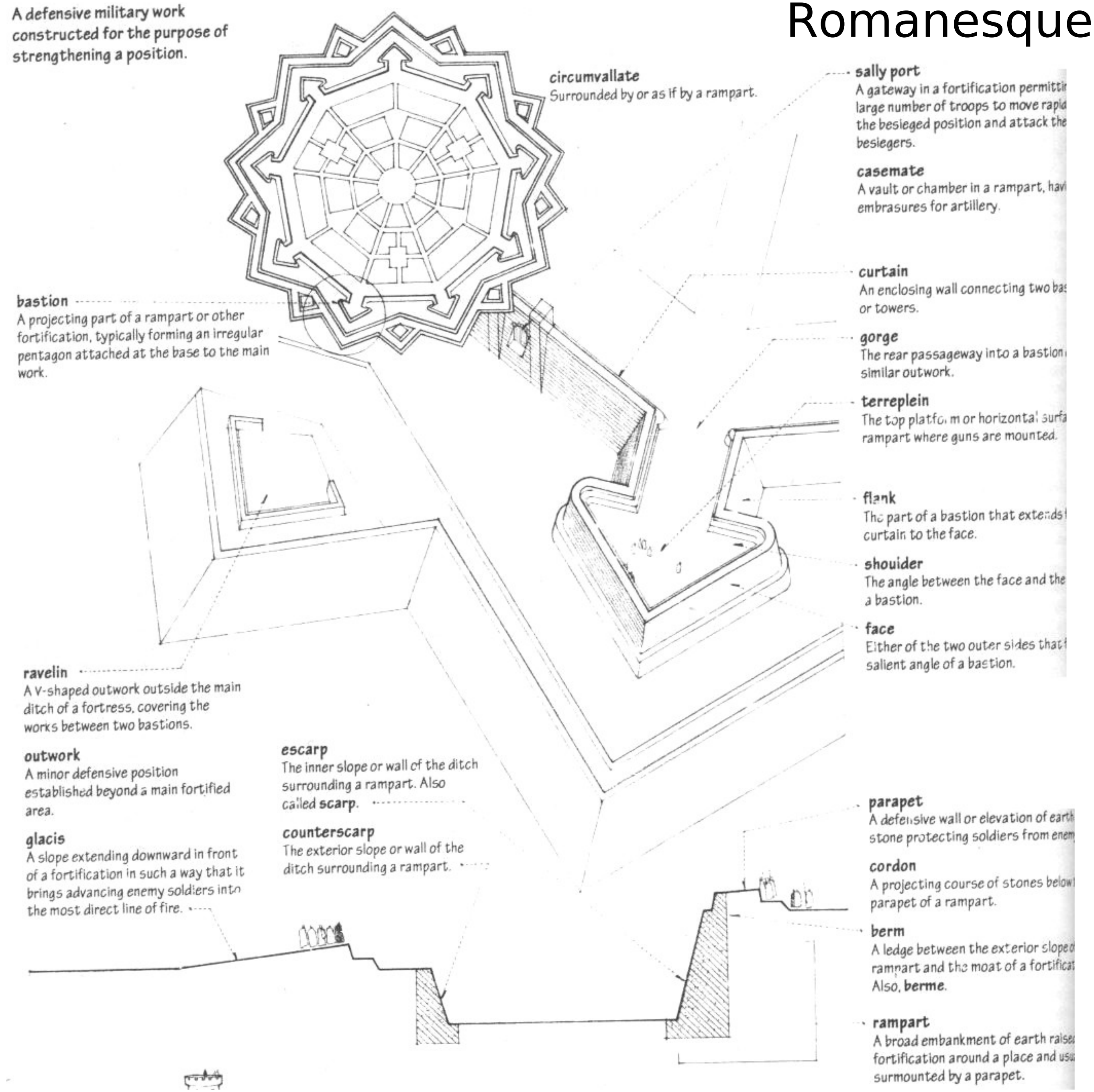
- All over Europe - 1500 castles in England in 11th and 12th centuries



motte
A steep mound of earth surrounded by a ditch and surmounted by a timber stockade and tower.
motte and bailey
A Norman castle of the 10th through 12th centuries, consisting of a motte placed within a bailey.

- Began as motte and bailey earthworks
- Later became citadels with stone curtain walls

Romanesque



A defensive military work constructed for the purpose of strengthening a position.

bastion
A projecting part of a rampart or other fortification, typically forming an irregular pentagon attached at the base to the main work.

ravelin
A V-shaped outwork outside the main ditch of a fortress, covering the works between two bastions.

outwork
A minor defensive position established beyond a main fortified area.

glacis
A slope extending downward in front of a fortification in such a way that it brings advancing enemy soldiers into the most direct line of fire.

escarp
The inner slope or wall of the ditch surrounding a rampart. Also called **scarp**.

counterscarp
The exterior slope or wall of the ditch surrounding a rampart.

circumvallate
Surrounded by or as if by a rampart.

sally port
A gateway in a fortification permitti
large number of troops to move rapi
the besieged position and attack the
besiegers.

casemate
A vault or chamber in a rampart, hav
embrasures for artillery.

curtain
An enclosing wall connecting two ba
or towers.

gorge
The rear passageway into a bastion
similar outwork.

terreplein
The top platform or horizontal surf
rampart where guns are mounted.

flank
The part of a bastion that extends
curtain to the face.

shoulder
The angle between the face and the
a bastion.

face
Either of the two outer sides that
salient angle of a bastion.

parapet
A defensive wall or elevation of eart
stone protecting soldiers from enem

cordon
A projecting course of stones below
parapet of a rampart.

berm
A ledge between the exterior slope
rampart and the moat of a fortifica
Also, **berme**.

rampart
A broad embankment of earth raise
fortification around a place and usu
surmounted by a parapet.

history of architecture

- PRE-HISTORIC
- NEAR EAST
- EGYPTIAN
- GREEK
- ROMAN
- EARLY CHRISTIAN
- BYZANTINE
- ROMANESQUE
- GOTHIC
- RENAISSANCE
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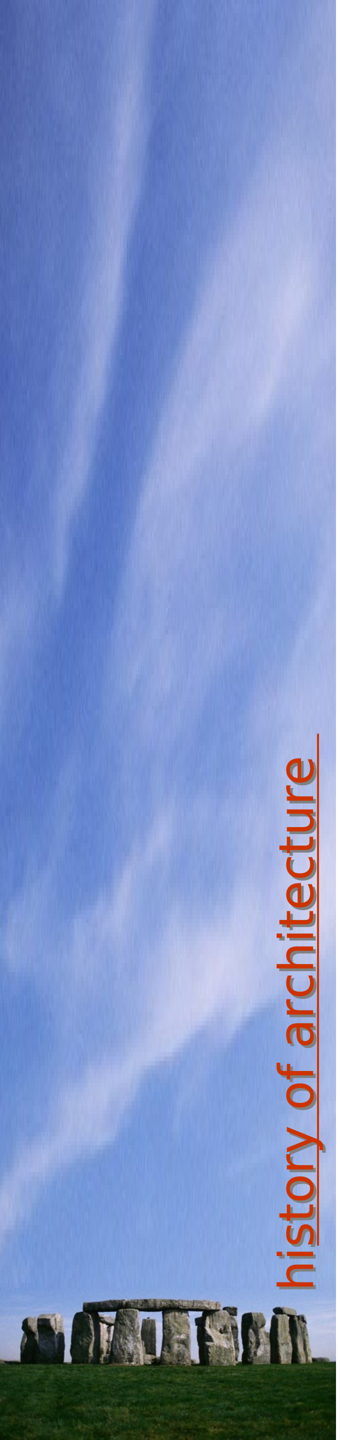
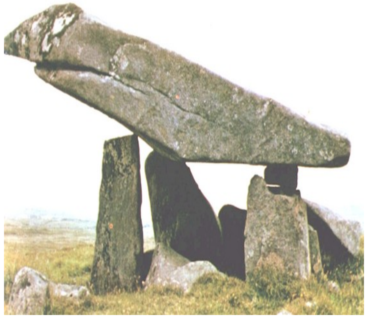
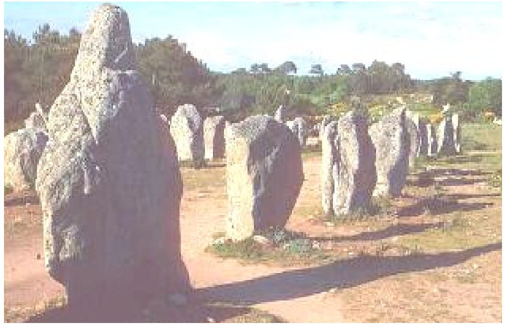
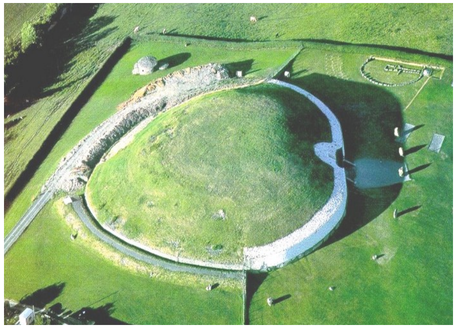
- FILIPINO

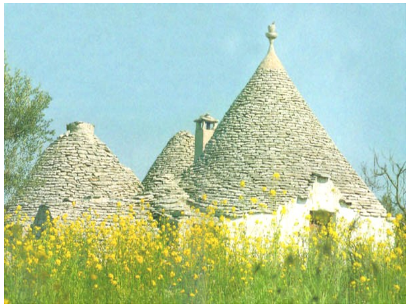


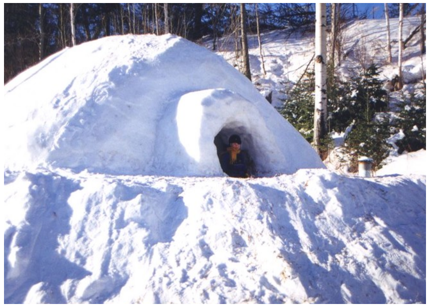
history of architecture

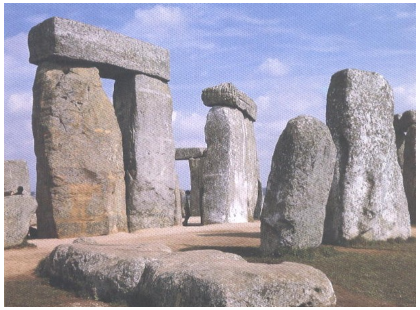


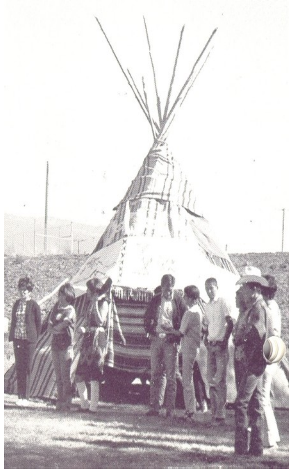


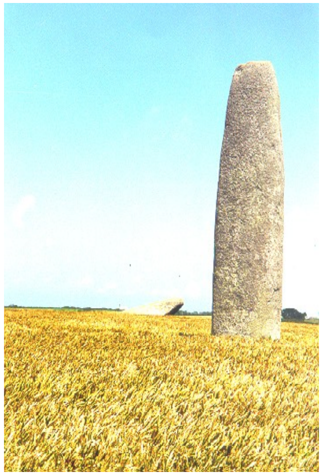




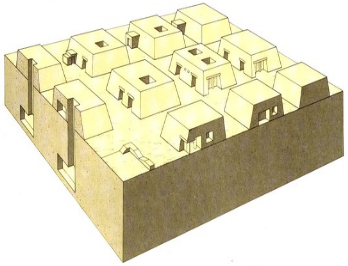


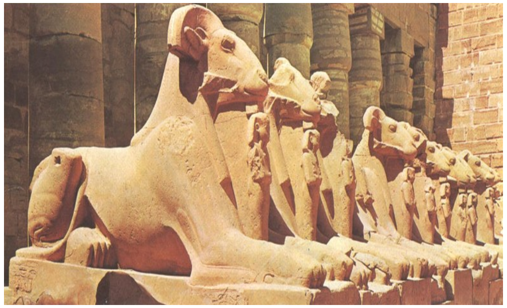


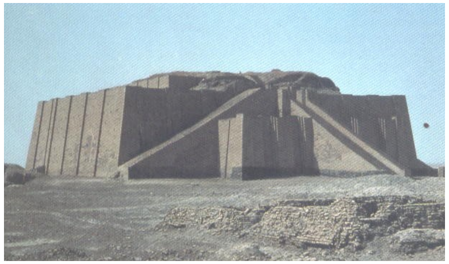


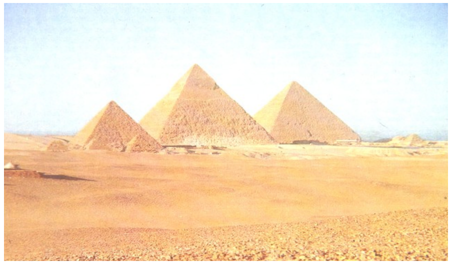


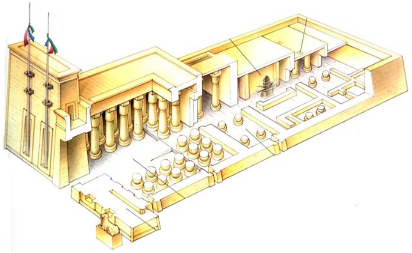
history of architecture

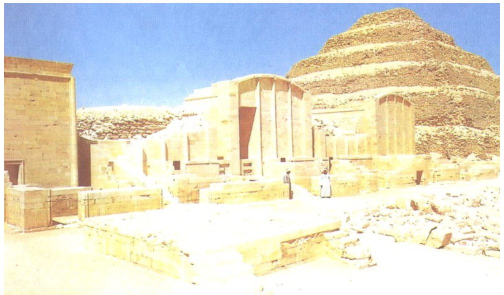


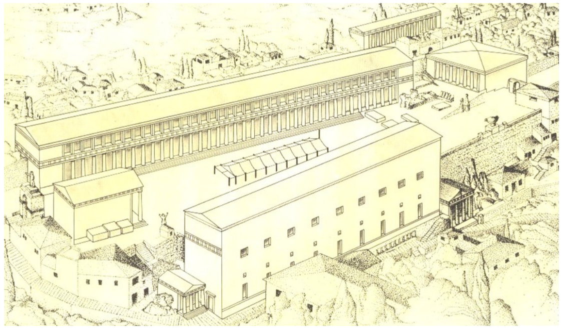


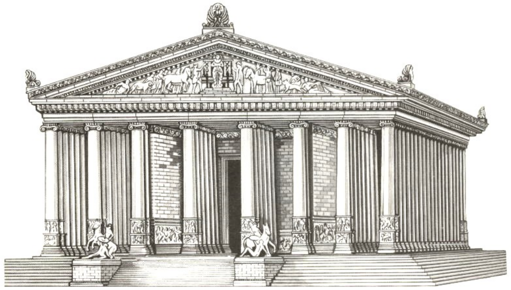


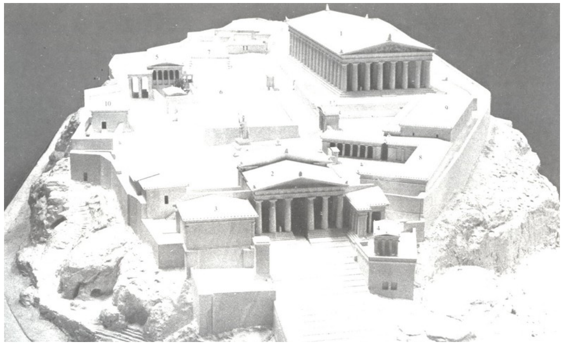


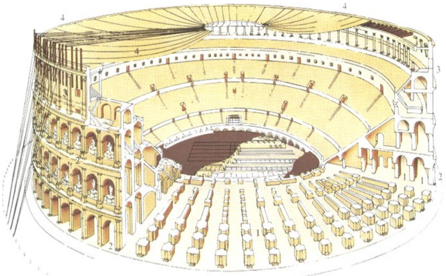


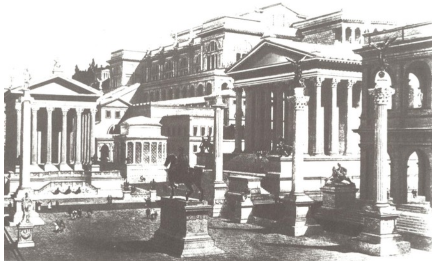


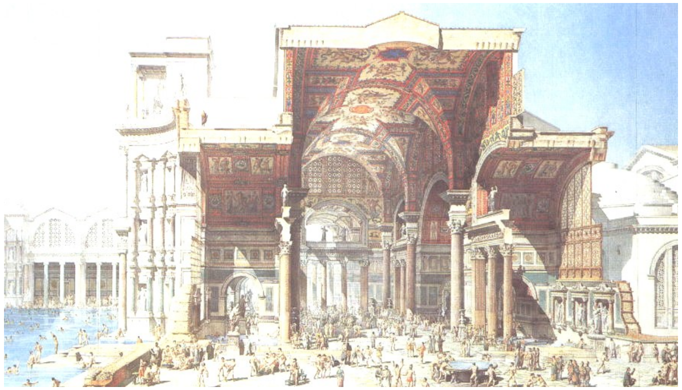


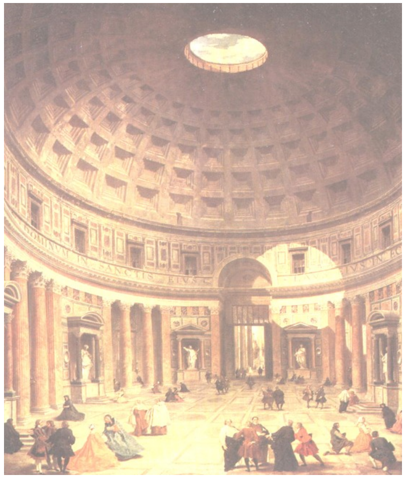


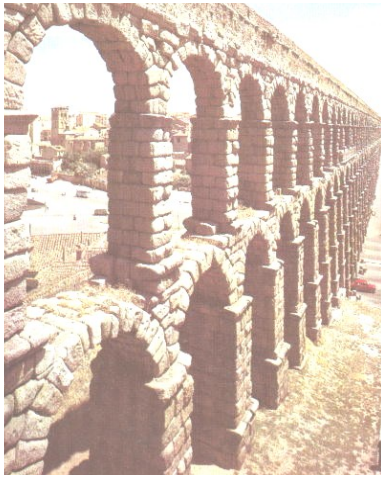


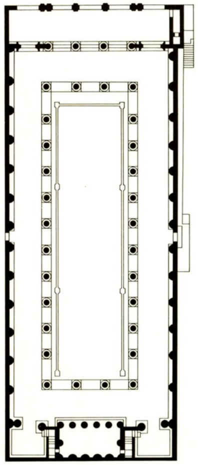


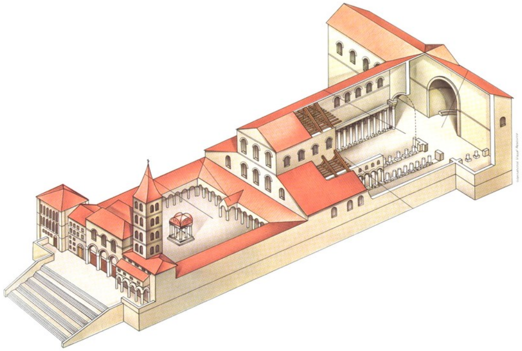


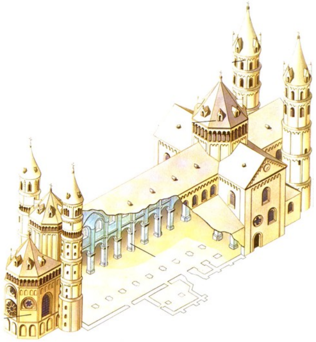


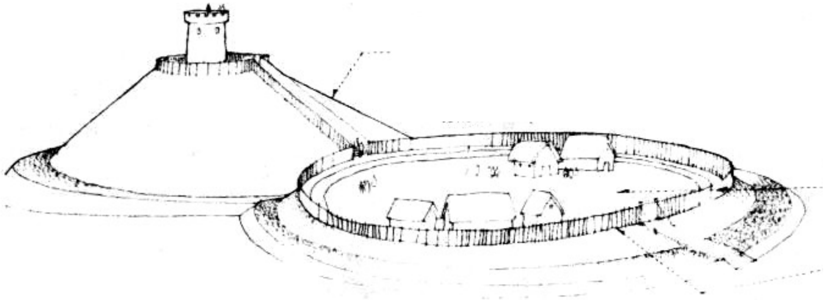




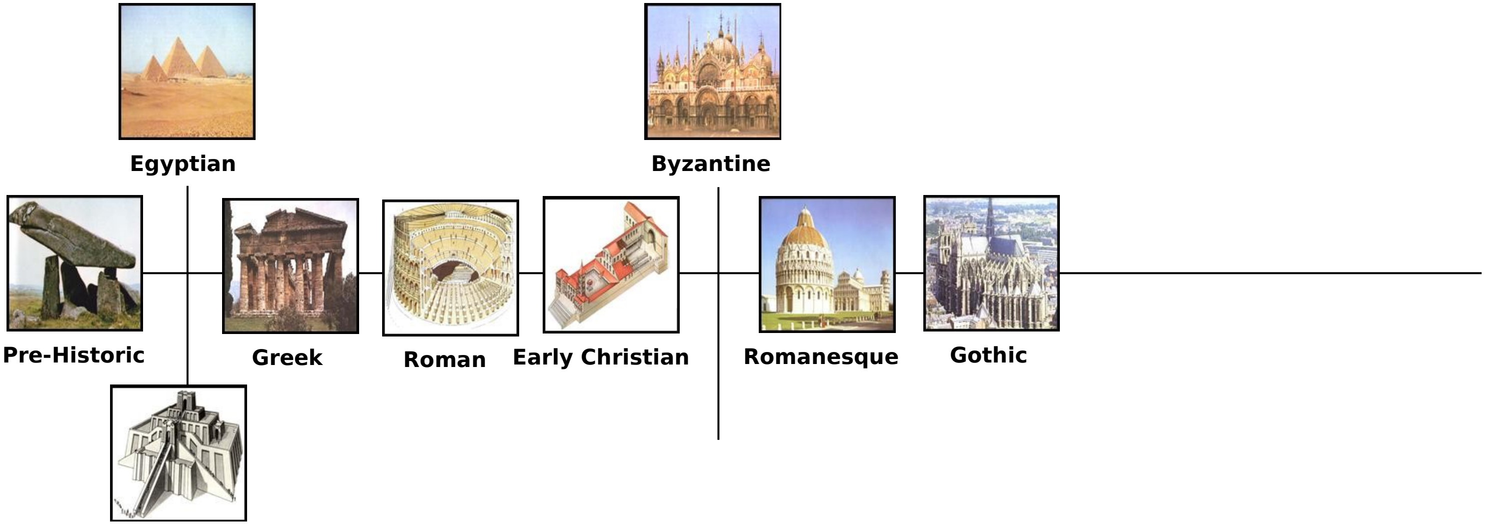








The Historical Timeline of Architecture



Egyptian

Byzantine

Pre-Historic

Greek

Roman

Early Christian

Romanesque

Gothic

Near East

PRE-HISTORIC
NEAR EAST
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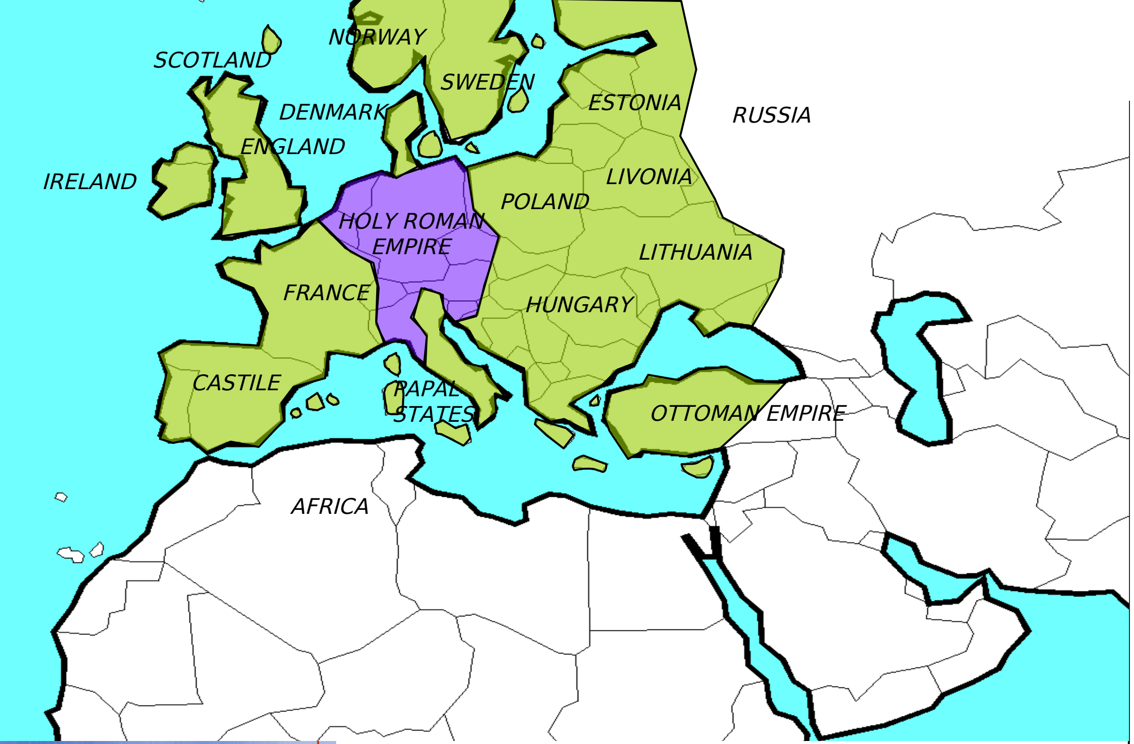
history of architecture


SCOTLAND
NORWAY
SWEDEN
DENMARK
ESTONIA
RUSSIA
ENGLAND
IRELAND
LIVONIA
POLAND
HOLY ROMAN EMPIRE
LITHUANIA
FRANCE
HUNGARY
CASTILE
PAPAL STATES
OTTOMAN EMPIRE
AFRICA

Gothic

PRE-HISTORIC
NEAR EAST
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history of architecture

INFLUENCES

HISTORY

- 12th – 13th centuries: Holy Roman Empire was reduced to the area of Germany
- Only 3 great kingdoms were left: France, England and Castile in Spain

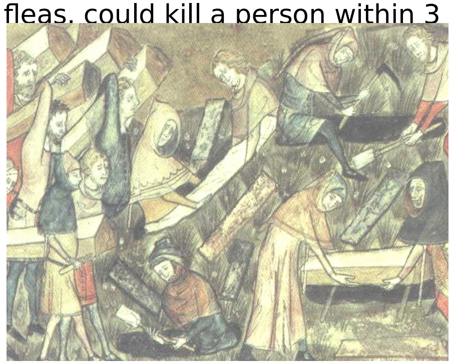
- Prosperous years in terms of agriculture - warm weather and invention of the windmill and water-mill increased the amount of food produced

- Most Europeans were Catholics
- Church under the Pope brought Christians together
- Entire Christianity was united against Muslims
- The rulers, the church and townspeople spent wealth on building more castles, cathedrals and monasteries
- Towns competed with each other to produce the

- Some 4000 new towns were built to accommodate the rising population
- Towns became centers of trade – Paris, Milan, Florence, Venice, Naples

- Mixture of lands ruled by nobles
- Feudal system - landlords ruled with tyranny

- There was restlessness among the people
- Towns became crowded and dirty - disease was rife
- Black Death struck Europe from 1347 to 1351 and killed half the population - spread by rats and fleas, could kill a person within 3 days



ARCHITECTURAL CHARACTER - DESCRIPTION

- "Gothic" is a term used in reproach to this style
- a departure from classic lines
- Can be identified by the general use of pointed arch
- Also called “Medieval Architecture”

Gothic

FRANCE

- In French, "L'architecture Ogivale“

Primaire (12th Century AD)

- Also called "a lancettes"
- Distinguished by pointed arches and geometric traceried windows

Secondaire (13th Century AD)

- Also called "Rayonnant"
- Characterized by circular windows with wheel tracery

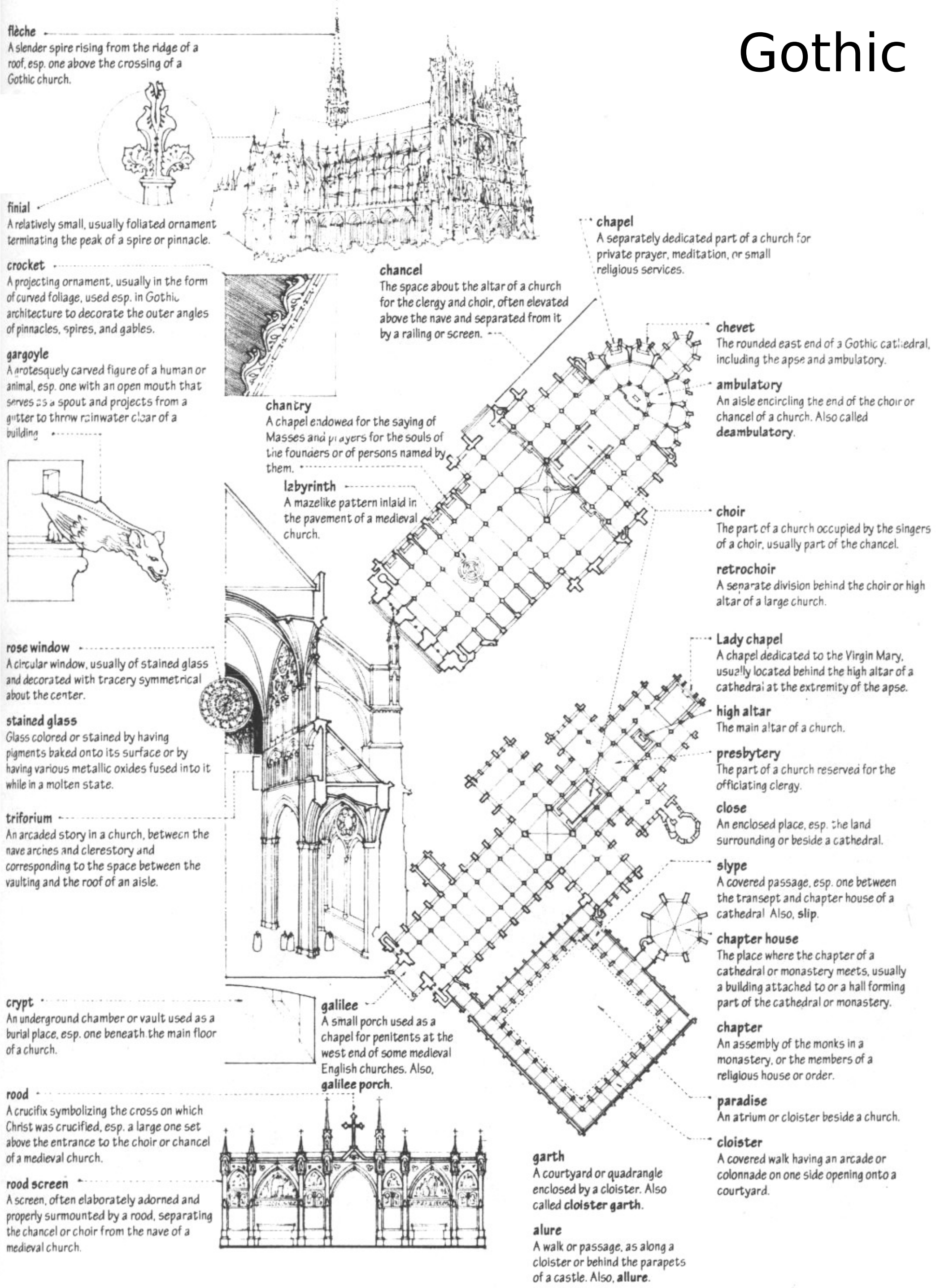
Tertiare (14th to 16th Century AD)

- Also called "Flamboyant"
- Flame-like window tracery or free-flowing tracery

Features:

- Use of pointed arch to cover rectangular bays
- Use of flying buttresses weighted by pinnacles
- Tall, thin columns – “stretching up as if to heaven”
- Walls released from load-bearing function
- Invention of colored, stained glass windows to adorn window-walls

- Tracery windows provided a framework for Bible stories to be told in pictures
- Cathedrals as a library for illiterate townspeople - Biblical stories were told with stained-glass and statuary



flèche
A slender spire rising from the ridge of a roof, esp. one above the crossing of a Gothic church.

finial
A relatively small, usually foliated ornament terminating the peak of a spire or pinnacle.

crocket
A projecting ornament, usually in the form of curved foliage, used esp. in Gothic architecture to decorate the outer angles of pinnacles, spires, and gables.

gargoyle
A grotesquely carved figure of a human or animal, esp. one with an open mouth that serves as a spout and projects from a gutter to throw rainwater clear of a building.

rose window
A circular window, usually of stained glass and decorated with tracery symmetrical about the center.

stained glass
Glass colored or stained by having pigments baked onto its surface or by having various metallic oxides fused into it while in a molten state.

triforium
An arcaded story in a church, between the nave arches and clerestory and corresponding to the space between the vaulting and the roof of an aisle.

crypt
An underground chamber or vault used as a burial place, esp. one beneath the main floor of a church.

rood
A crucifix symbolizing the cross on which Christ was crucified, esp. a large one set above the entrance to the choir or chancel of a medieval church.

rood screen
A screen, often elaborately adorned and properly surmounted by a rood, separating the chancel or choir from the nave of a medieval church.

chancel
The space about the altar of a church for the clergy and choir, often elevated above the nave and separated from it by a railing or screen.

chantry
A chapel endowed for the saying of Masses and prayers for the souls of the founders or of persons named by them.

labyrinth
A mazelike pattern inlaid in the pavement of a medieval church.

galilee
A small porch used as a chapel for penitents at the west end of some medieval English churches. Also, **galilee porch**.

garth
A courtyard or quadrangle enclosed by a cloister. Also called **cloister garth**.

alure
A walk or passage, as along a cloister or behind the parapets of a castle. Also, **allure**.

chapel
A separately dedicated part of a church for private prayer, meditation, or small religious services.

chevet
The rounded east end of a Gothic cathedral, including the apse and ambulatory.

ambulatory
An aisle encircling the end of the choir or chancel of a church. Also called **deambulatory**.

choir
The part of a church occupied by the singers of a choir, usually part of the chancel.

retrochoir
A separate division behind the choir or high altar of a large church.

Lady chapel
A chapel dedicated to the Virgin Mary, usually located behind the high altar of a cathedral at the extremity of the apse.

high altar
The main altar of a church.

presbytery
The part of a church reserved for the officiating clergy.

close
An enclosed place, esp. the land surrounding or beside a cathedral.

slype
A covered passage, esp. one between the transept and chapter house of a cathedral. Also, **slip**.

chapter house
The place where the chapter of a cathedral or monastery meets, usually a building attached to or a hall forming part of the cathedral or monastery.

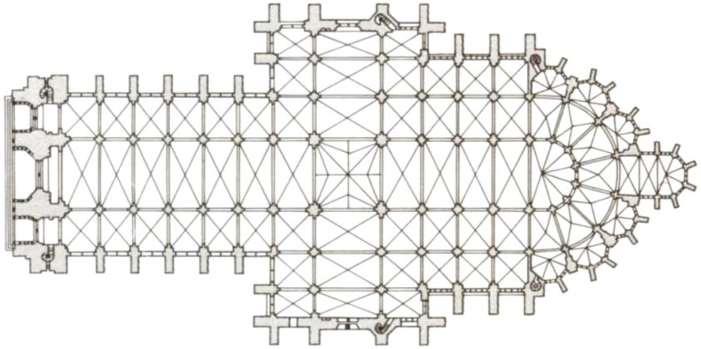
chapter
An assembly of the monks in a monastery, or the members of a religious house or order.

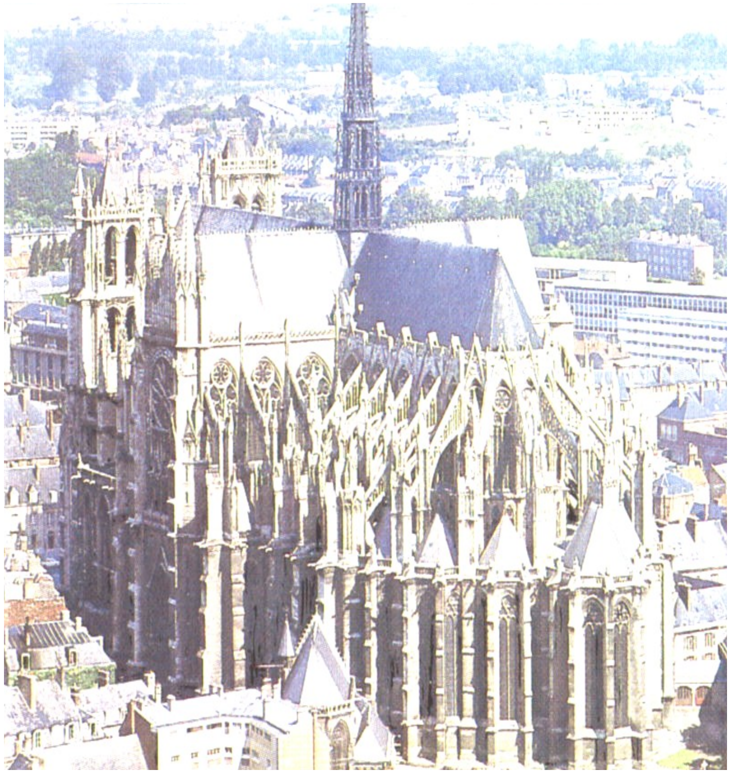
paradise
An atrium or cloister beside a church.

cloister
A covered walk having an arcade or colonnade on one side opening onto a courtyard.

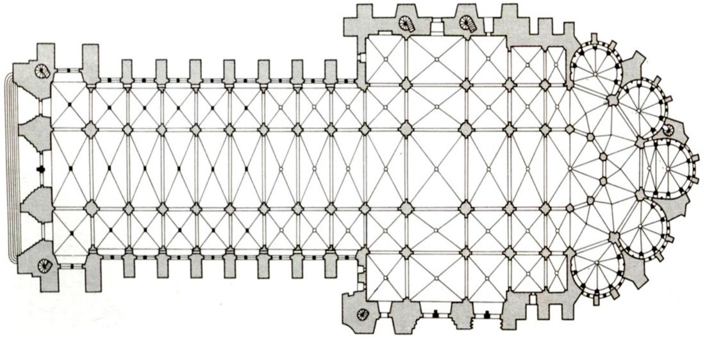
Gothic

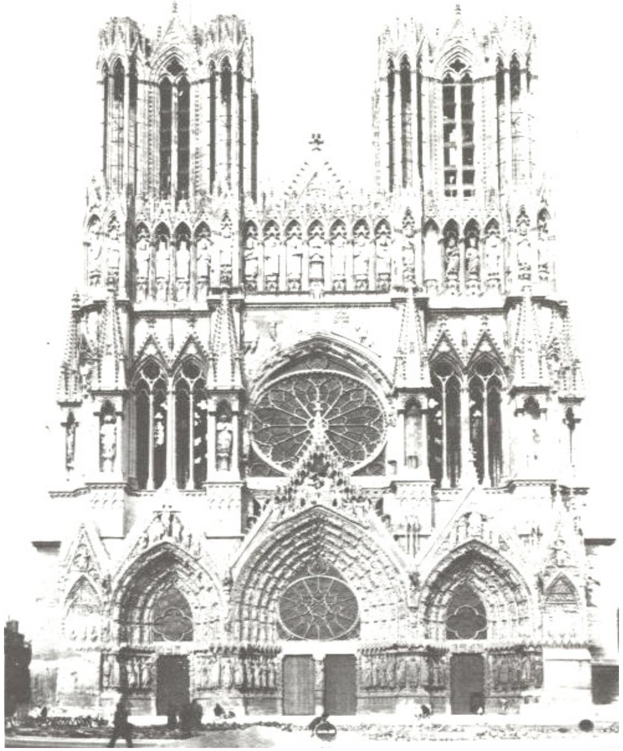
Amiens Cathedral





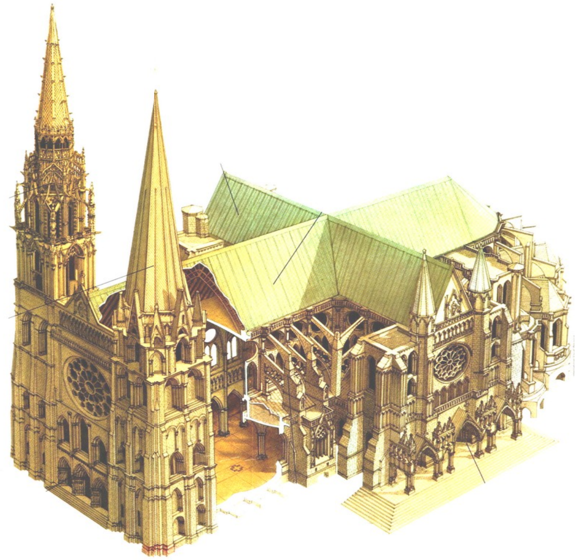
Reims Cathedral

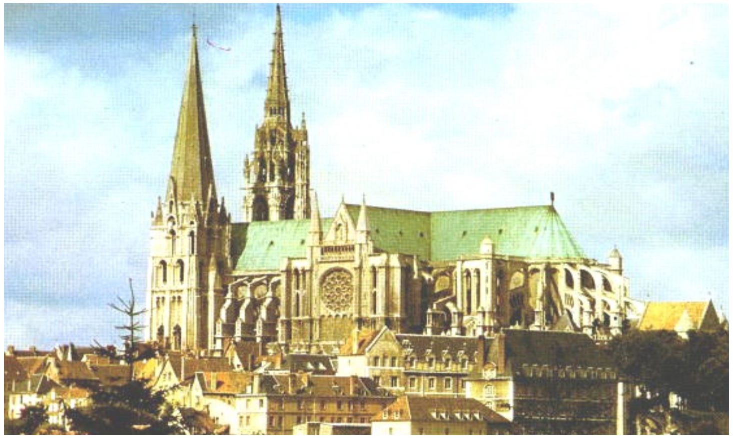


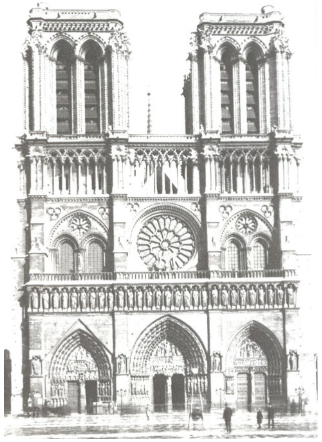


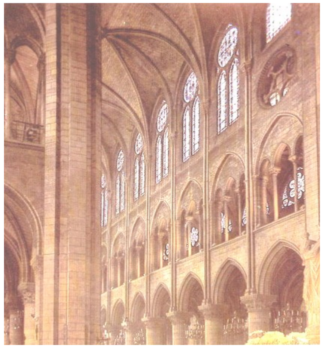
Gothic

Chartres Cathedral





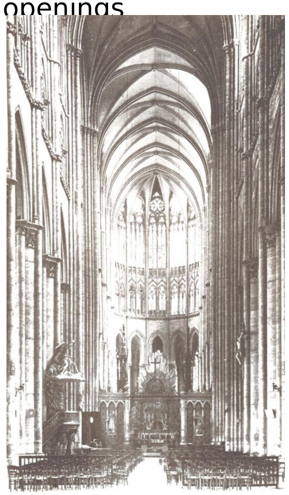


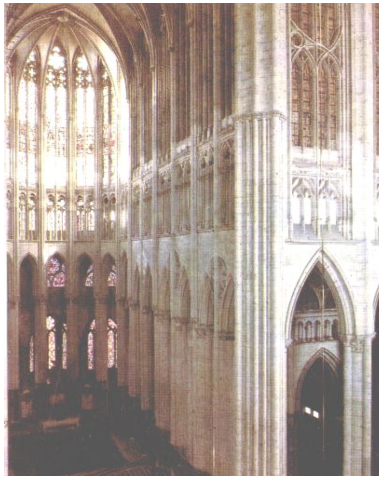


Notre Dame, Paris

- One of the oldest French cathedrals
- Begun by Bishop Maurice de Sully

- Façade features successive tiers of niches with statues: Christ and French kings
- Central wheel window
- Two western towers with high pointed louvred openings





Other cathedrals:
Beauvais Cathedral
Laon Cathedral
Soissons Cathedral

Gothic

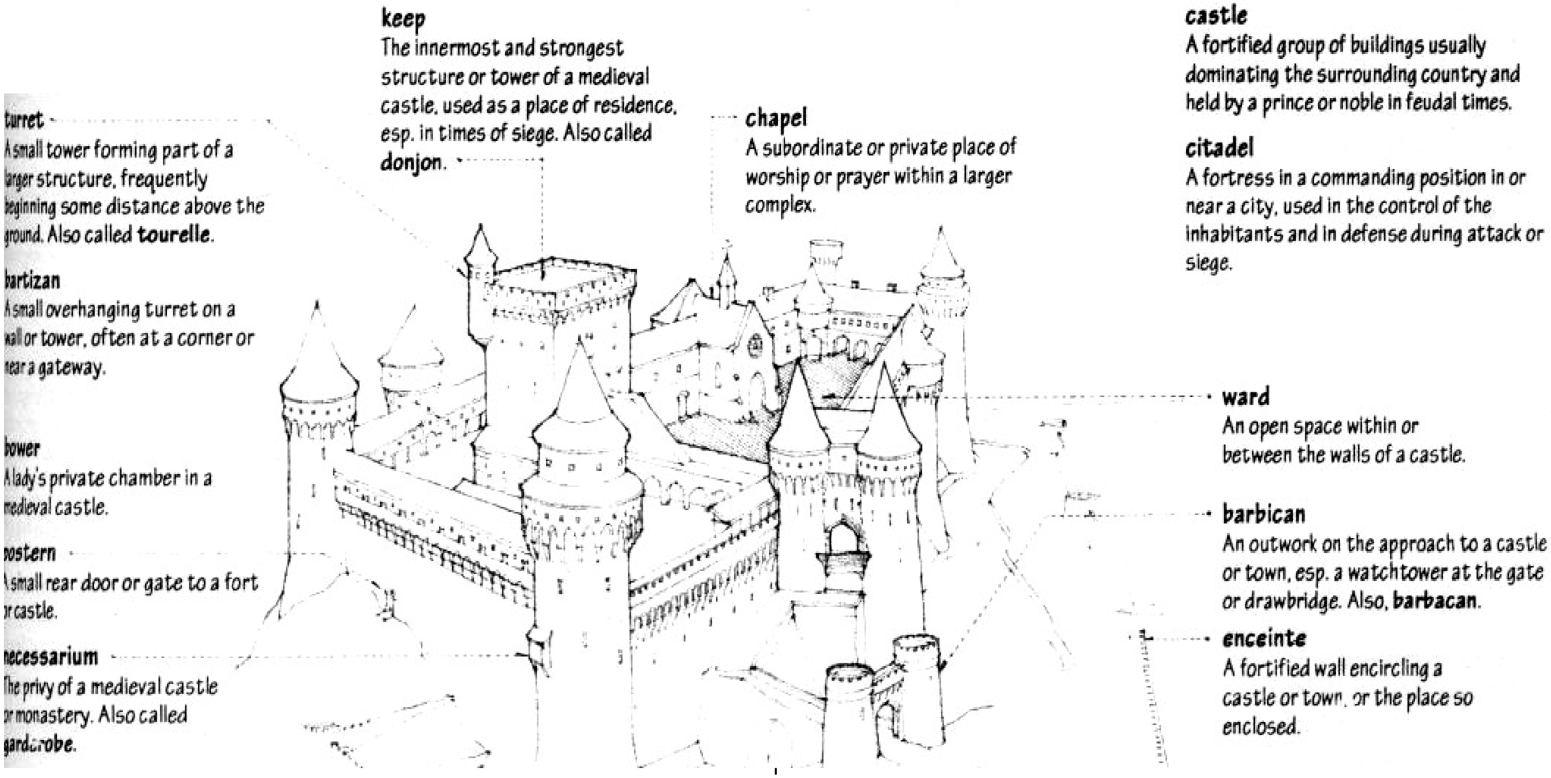
CASTLES

- Built on mounds above rivers
- Thick walls and small windows to resist attack

- Many were adapted to make convenient residences in later periods

Carcassone

- built in 13th Century AD
- double wall, inner one made in 600 AD
- 50 towers and moat
- two gateways guarded by machicolations, drawbridge and portcullis



turret
A small tower forming part of a larger structure, frequently beginning some distance above the ground. Also called **tourelle**.

bartizan
A small overhanging turret on a wall or tower, often at a corner or near a gateway.

bower
A lady's private chamber in a medieval castle.

postern
A small rear door or gate to a fort or castle.

necessarium
The privy of a medieval castle or monastery. Also called **garderobe**.

keep
The innermost and strongest structure or tower of a medieval castle, used as a place of residence, esp. in times of siege. Also called **donjon**.

chapel
A subordinate or private place of worship or prayer within a larger complex.

castle
A fortified group of buildings usually dominating the surrounding country and held by a prince or noble in feudal times.

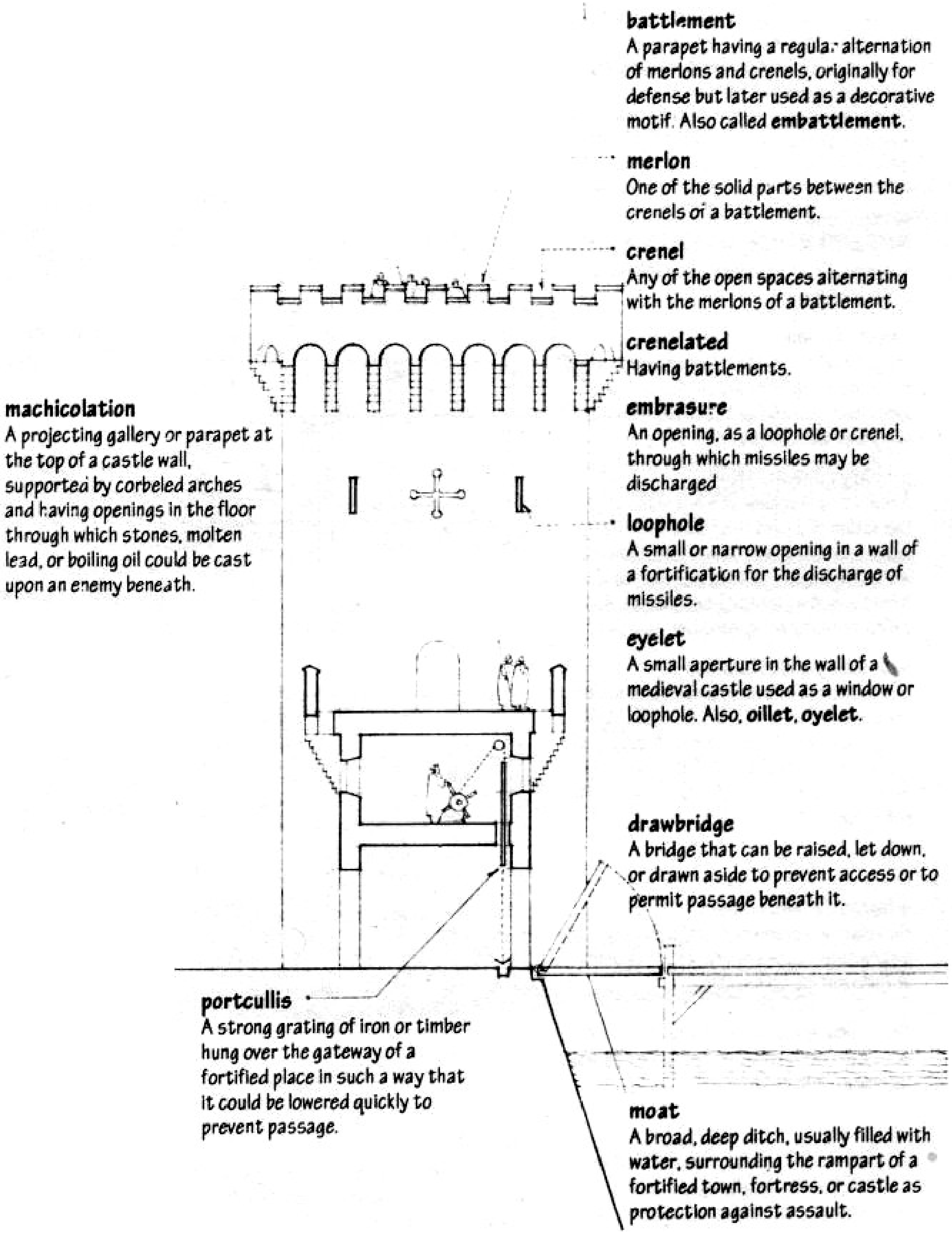
citadel
A fortress in a commanding position in or near a city, used in the control of the inhabitants and in defense during attack or siege.

ward
An open space within or between the walls of a castle.

barbican
An outwork on the approach to a castle or town, esp. a watchtower at the gate or drawbridge. Also, **barbacan**.

enceinte
A fortified wall encircling a castle or town, or the place so enclosed.

Gothic



battlement
A parapet having a regular alternation of merlons and crenels, originally for defense but later used as a decorative motif. Also called **embattlement**.

merlon
One of the solid parts between the crenels of a battlement.

crenel
Any of the open spaces alternating with the merlons of a battlement.

crenelated
Having battlements.

embrasure
An opening, as a loophole or crenel, through which missiles may be discharged

loophole
A small or narrow opening in a wall of a fortification for the discharge of missiles.

eyelet
A small aperture in the wall of a medieval castle used as a window or loophole. Also, **oillet**, **oyelet**.

machicolation
A projecting gallery or parapet at the top of a castle wall, supported by corbeled arches and having openings in the floor through which stones, molten lead, or boiling oil could be cast upon an enemy beneath.

drawbridge
A bridge that can be raised, let down, or drawn aside to prevent access or to permit passage beneath it.

portcullis
A strong grating of iron or timber hung over the gateway of a fortified place in such a way that it could be lowered quickly to prevent passage.

moat
A broad, deep ditch, usually filled with water, surrounding the rampart of a fortified town, fortress, or castle as protection against assault.

Gothic

ENGLAND

NORMAN (1066 to 1154 AD)
- Includes the raising of most of major Romanesque churches and castles

TRANSITIONAL (1154 to 1189 AD)
- Pointed arches in Romanesque structures

EARLY ENGLISH (1189 to 1307 AD)
- Equivalent to High Gothic in France
- Also called "Lancet" or "First Pointed" style, from long narrow pointed windows

DECORATED (1307 to 1377 AD)
- Window tracery is "Geometrical" in form, and later, flowing tracery patterns and curvilinear surface pattern
- Also called "Second Pointed", equivalent to French "Flamboyant" style

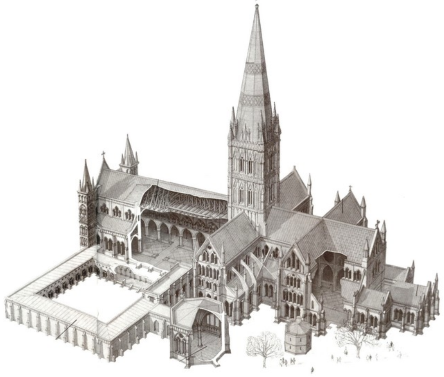
PERPENDICULAR (1377 to 1485 AD)
- Also called "Rectilinear“ or "Third Pointed"

TUDOR (1495 to 1558 AD)
- Increasing application of Renaissance detail

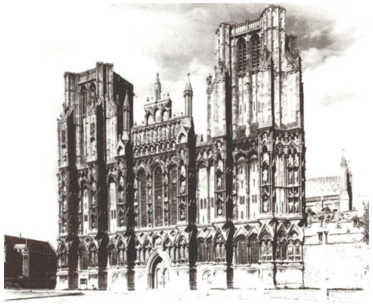
ELIZABETHAN (1558 to 1603 AD)
- Renaissance ideas take strong hold

CATHEDRALS

- May have been attached to monasteries or to collegiate institutions
- Found in precincts with dormitories, infirmary, guest houses, cloisters, refrectory, other buildings



Salisbury Cathedral



Westminster Abbey
- Complex of church, royal palace and burial grounds
- Most important medieval building in Britain
- widest (32 m) and highest vault in England (102 ft)

Other examples:
Wells Cathedral
York Cathedral - largest medieval cathedral in England and in Northern Europe
Winchester Cathedral - longest medieval cathedral in England

Gothic

MANOR HOUSES

- Erected by new and wealthy trading families

Parts:

- great hall, room with solar room, chapel, latrine chamber, service rooms, kitchens, central hearth

Later, in Tudor Manor Houses

- increased rooms, quadrangular court, battlement parapets, and gateways, chimneys, buttery (butler's pantry), oven, pantry, serving area and storage, larder (food storage), wardrobe, oratory-study, private chapel with altar and crucifix, scullery, brew house

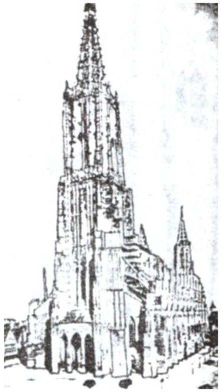
Penhurst Place, Kent

GERMANY, BELGIUM AND THE NETHERLANDS

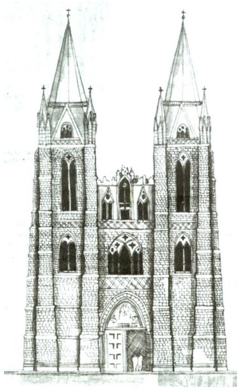
- In Germany, the chief influence came from France, not from German Romanesque
- In Belgium and The Netherlands, it was based on French Gothic, developing the Brabantine style

HALL CHURCHES

- Had a different look:
- Nave and aisle of same height
- One or two immense and ornate western towers or apse, in place of sculptured doorway
- Brick-work and simplified ornamentation



Ulm Cathedral



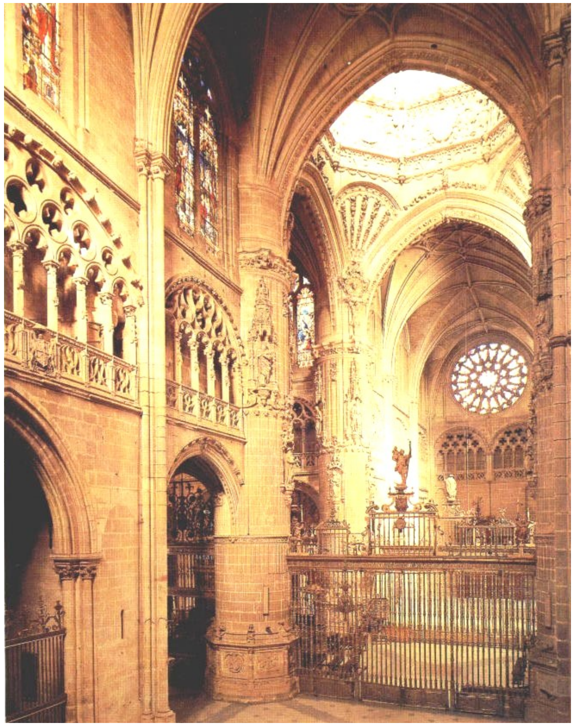
St. Elizabeth, Marburg

- Typical hall church

Gothic

SPAIN

- Strong Moorish influences: the use of horseshoe arches and rich surface decoration of intricate geometrical and flowing patterns
- Churches had flat exterior appearance, due to chapels inserted between buttresses
- Excessive ornament, without regard to constructive character



Burgos Cathedral (1221 - 1457 AD)

- Irregular in plan
- Most beautiful and poetic of all Spanish cathedrals

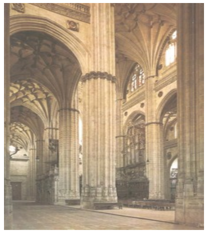
Seville Cathedral (1402 to 1520 AD)

- Largest Medieval church in Europe
- Second largest church in the world, next to St. Peter's, Rome

Gerona Cathedral

Granada Cathedral

Toledo Cathedral



Salamanca Cathedral

Other cathedrals:

- *Avila Cathedral, Segovia Cathedral, Barcelona Cathedral*

Gothic

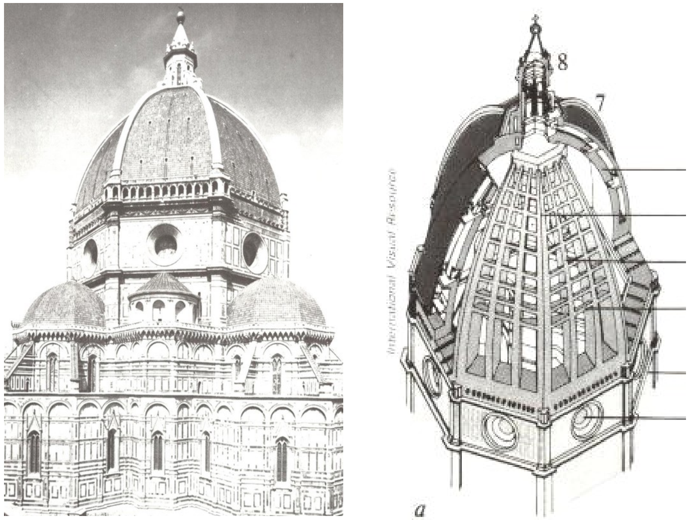
ITALY

- Led the way in Europe, in terms of art, learning and commerce

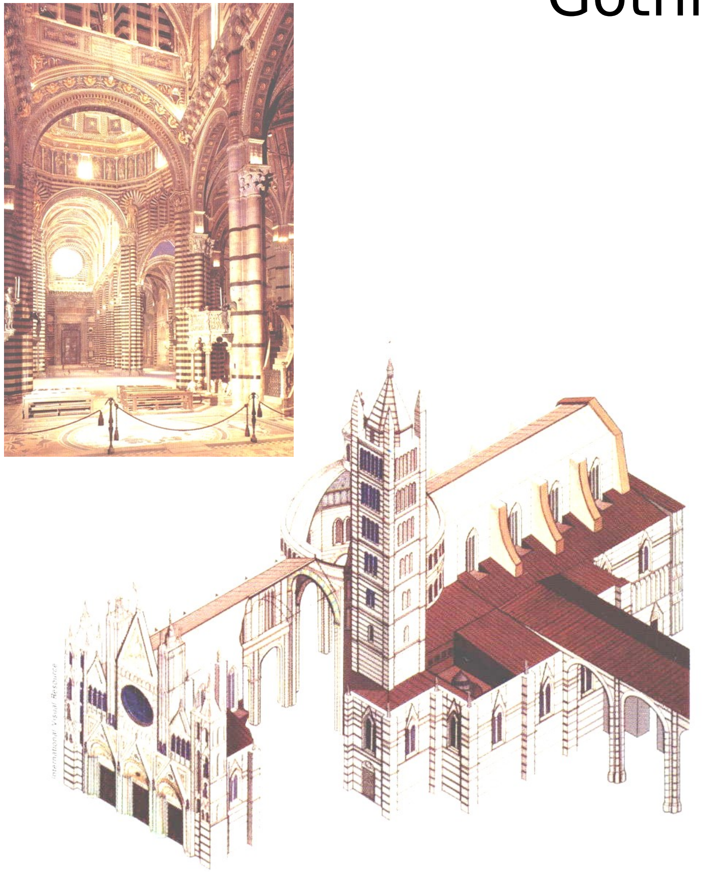
- Cultural revival was taking place in Italy in advance of northern Europe

- Roman tradition remained strong

- This arrested the development of Gothic architecture in Italy
- Verticality of Gothic is generally neutralized by horizontal cornices and string courses
- Absence of pinnacles and flying buttresses
- Small windows without tracery
- Projecting entrance porches with columns on lion-like beasts



Florence Cathedral or S. Maria del Fiore
- Designed by Arnolfo di Cambio
- Essentially Italian in character, without the vertical features of Gothic
- Peculiar latin cross plan with campanile and baptistery



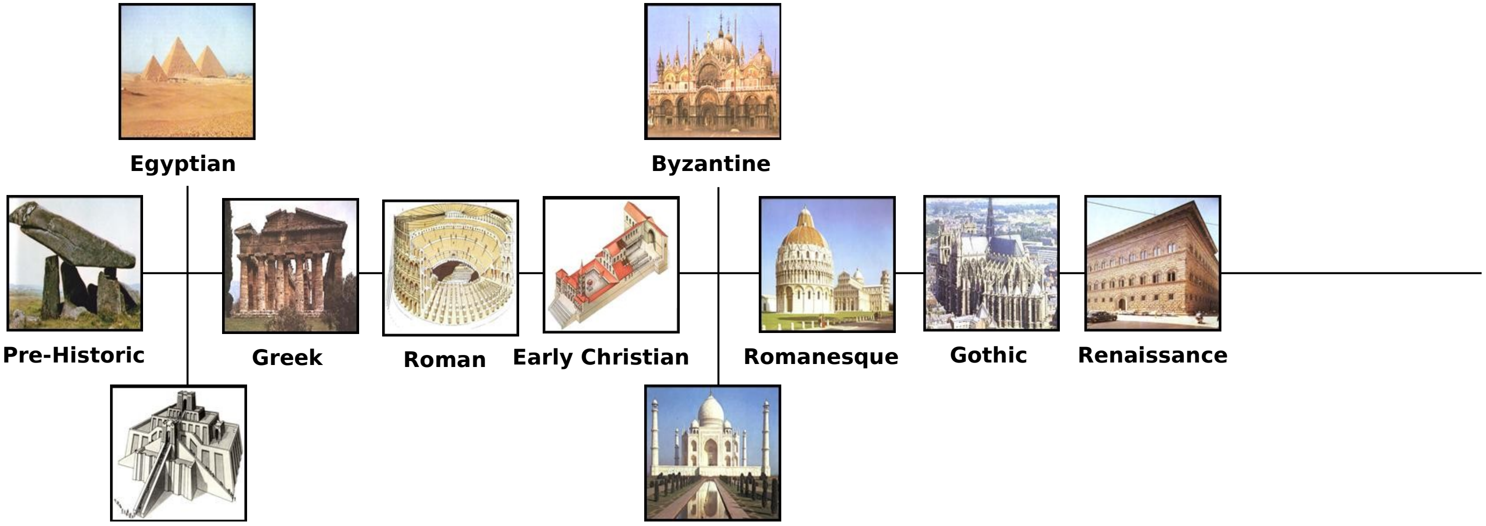
Siena Cathedral
- One of most stupendous undertakings since the building of the Pisa cathedral
- Outcome of civic pride - all artists in Siena contributed their works to its building and adornment
- Cruciform plan
- Zebra marble striping on wall and pier

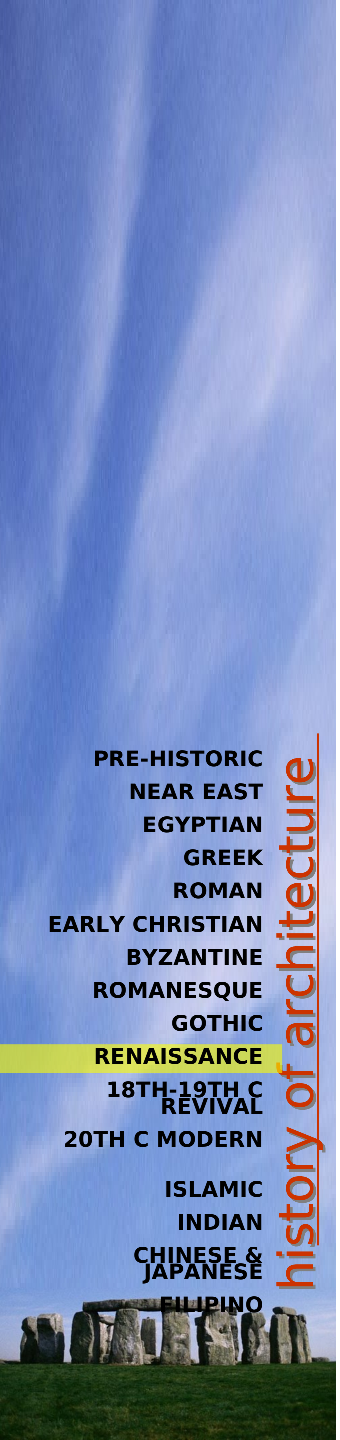
Other cathedrals:

Milan Cathedral
- Largest Medieval cathedral in Italy
- 3rd largest cathedral in Europe

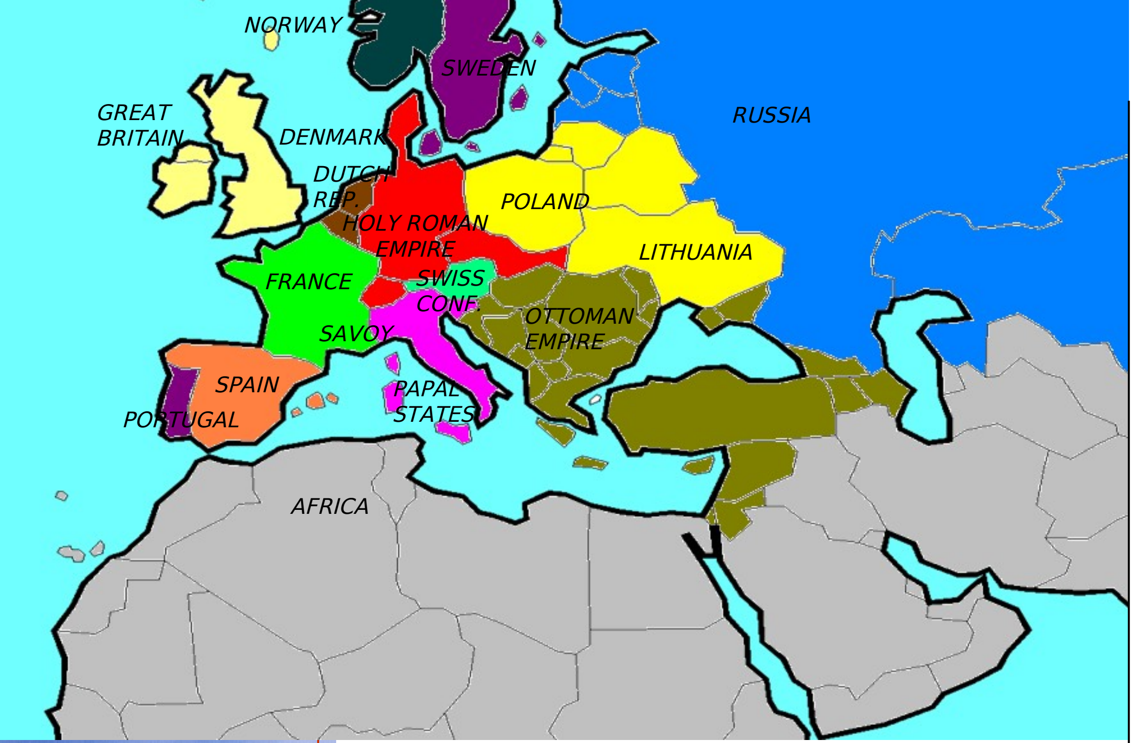
Renaissance

The Historical Timeline of Architecture


Egyptian
Byzantine
Pre-Historic
Greek
Roman
Early Christian
Romanesque
Gothic
Renaissance
Near East
Islamic



Renaissance


NORWAY
SWEDEN
GREAT BRITAIN
DENMARK
DUTCH REP.
RUSSIA
POLAND
HOLY ROMAN EMPIRE
LITHUANIA
FRANCE
SWISS CONF.
OTTOMAN EMPIRE
SAVOY
SPAIN
PORTUGAL
PAPAL STATES
AFRICA

INFLUENCES

HISTORY

- Previous trade routes to the east had now been blocked by the Ottoman Turks in Constantinople
- 1450, series of voyages and explorations by sea led by Spain and Portugal
- For trade mostly but also for the discovery of more lands

- Warfare was changed by the invention of gunpowder

- Printing by Movable Types
- Led to the mass production of books
- Contributed to the circulation of ideas and knowledge

- Several Christian thinkers challenged and attacked the beliefs, customs, power and wealth of the Catholic Church
- Protestants in Germany, Scandinavia and England
- Martin Luth vin
- Religious unity of Christendom had begun t

ANDREAE VESALII BRVXELLENSIS
SECVNDA

- Increased understanding of Science and the Arts
- Medicine and Astronomy
- Human Anatomy by Andreas Vesalius

- Attempt to understand the ancient world, its values, literary, artistic forms and architectural

PRE-HISTORIC
NEAR EAST
EGYPTIAN
GREEK
ROMAN
EARLY CHRISTIAN
BYZANTINE
ROMANESQUE
GOTHIC
RENAISSANCE
18TH-19TH C REVIVAL
20TH C MODERN
ISLAMIC
INDIAN
CHINESE & JAPANESE
FILIPINO
history of architecture

Renaissance

ARCHITECTURAL CHARACTER

DESCRIPTION

- The Renaissance movement created a break in the evolution of European church architecture
- Departure from Gothic, with the employment of Classic Roman “Orders of Architecture”
- Byzantine structural and decorative practices, instead of Gothic, were interwoven with those from Roman and Romanesque succession

PERIODS

EARLY RENAISSANCE
- Period of learning
- Designers were intent on the accurate transcription of Roman elements

HIGH RENAISSANCE or PROTO-BAROQUE
- Renaissance became an individual style in its own right
- Purist or Palladian, where Roman tradition was held in high respect (represented by Andrea Palladio)
- Proto-Baroque, where there was more confidence in using the acquired vocabulary freely (represented by Michelangelo)
- Mannerist, where practices which had no Roman precedent were interspersed with the usual buildings, or entire buildings were conceived in a non-Roman way
- Mannerists used architectural elements in a free, decorative and illogical way, unsanctioned by antique precedent

BAROQUE
- Architects worked with freedom and firmly-acquired knowledge
- The true nature of Renaissance as a distinctive style began to emerge
- Baroque saw architecture, painting, sculpture and the minor arts being used in harmony to

ROCOCO
- Style which is primarily French in origin
- Rock-like forms, fantastic scrolls, and crimped shells
- Profuse, often semi-abstract ornamentation
- Light in color and weight

IN SUMMARY:

- Palladian Architecture was logical, staid and serene

- Proto-Baroque Architecture was vivid, virile and intense

- Baroque Architecture was dramatic, rich, grand and alive

- Rococo Architecture was a profusion and confusion of detail, presenting a lavish display of decoration

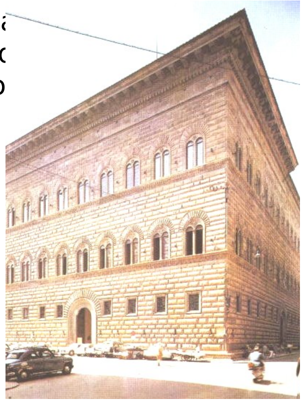
Renaissance

FLORENCE

- Cities of Florence, Genoa, Milan - central, chief powers of Italy
- Medici family - founded by Giovanni de Medici, who was a commercial and political power
- Vitality of social life at every level
- Artists, who excelled in several arts, achieve high status in society
- Craft guilds, with both religious and lay connotations, directed activities of studios and workshops
- Renaissance had its birth in Florence

PALAZZI

- With the development of gunpowder, palace-type building evolved, taking the place of fortified castles
- Built around a cortile or interior court, like medieval cloister
- Ground floor and piano nobile
- Façade of massive, rugged, fortress-like character due to use of rusticated masonry and wall angles called quoins
- Large windows unnecessary a
- Low pitched roof coverec parapet or boldly protruding ro



Palazzo Strozzi

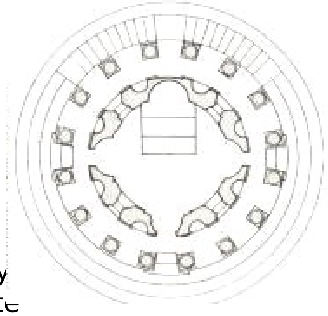
- By Benedetto da Majano
- Representative of the Florentine palace of that period
- Open cortile and piano nobile

ROME

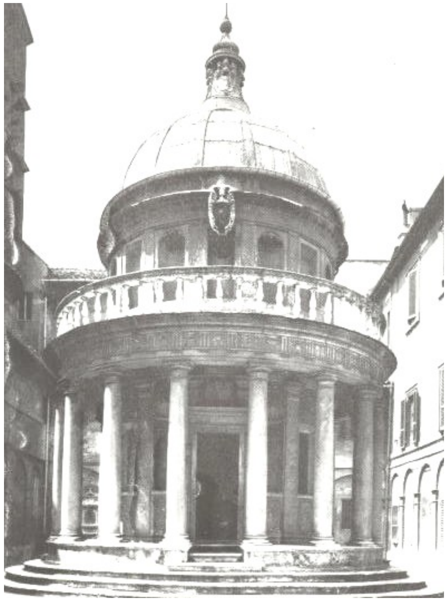
- Splendidly presented examples of High Renaissance and Proto-baroque
- Famous architect is Donato Bramante

Tempietto in S. Pietro, Montorio

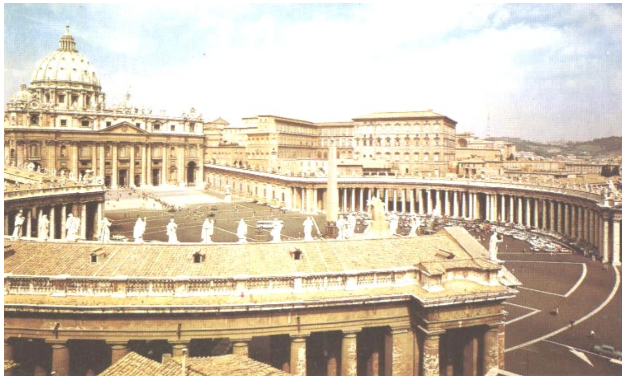
- Resembling small Roman circular temple with Doric columns
- 4.5 m internal diameter



- Site where S. Peter was marty
- Designed by Donato Bramante
- Dome on drum pierced with alternating windows and shell-headed niches



Renaissance

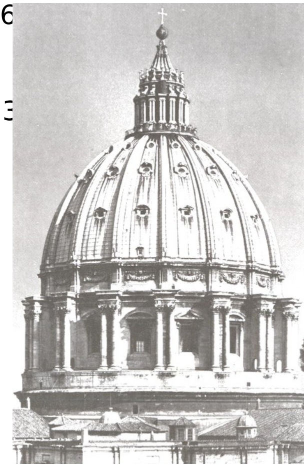


S. Peter, Rome
- Most important Renaissance building in Italy
- With cathedral, piazza and the Vatican, forms a world-famous group

- 120 years, outcome of the works of many architects under the direction of the pope

12 Architects:

1. Bramante
- His design was selected from several entries in a competition
- He proposed a Greek cross plan and a dome similar to the Pantheon in Rome
- Foundation stone laid in 1506



2. Giuliano da Sangallo
- Upon death of Julius II in 1513

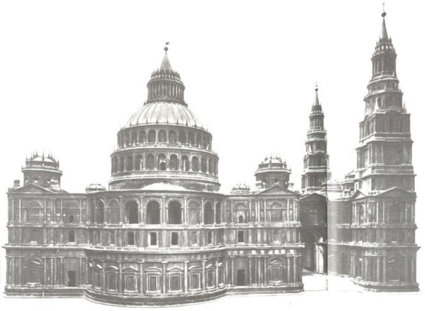
3. Fra Giocondo

4. Raphael
- Proposed a Latin cross plan
- Died

5. Baldassare Peruzzi
- Reverted to Greek cross
- Died

6. Antonio da Sangallo
- Slightly altered plan - extended vestibule and campanile, and elaborated the central dome
- Died

7. Michelangelo
- Undertook the project at 72 years old - present building owes most of its outstanding features to him
- Greek-cross plan, strengthened dome, redesigned surrounding



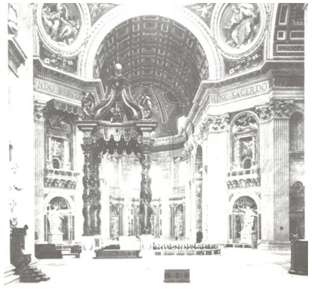
8. Giacomo della Porta

9. Domenico Fontana
- Completed dome in 1

10. Vignola
- Added sided cupolas

11. Carlo Maderna
- Lengthened nave to form Latin cross and built the gigantic facade

12. Bernini
- Erected noble entrance piazza 198 m wide with Tuscan colonnade



- Completed plan is a Latin cross with an internal length of 183 m, width of 137 m
- At crossing, majestic dome of 41.9 m internal diameter
- Largest church in the world

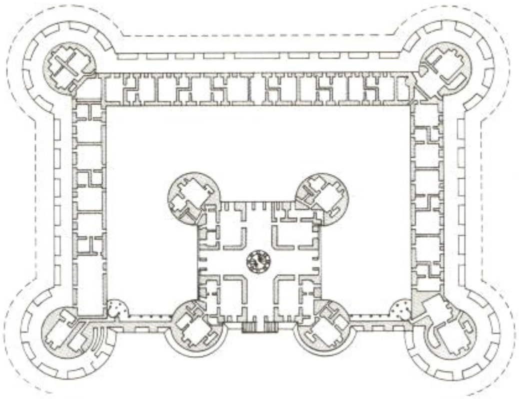
Renaissance

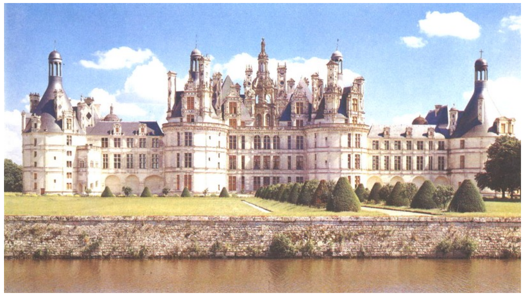
FRANCE

COUNTRY HOUSES

- Country houses took the place of fortified castles

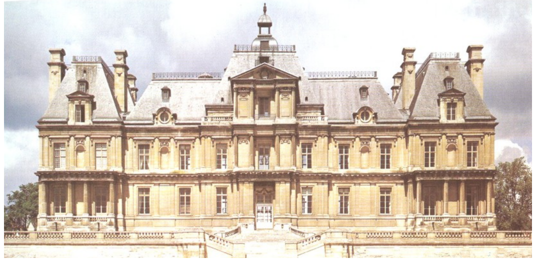
Some examples:
Chateau de Justice, Rouen
Chateau d'O, Mortree
Chateau de Josselin
Chateau de Blois
Chateau d'Azay-Rideau
Chateau de Chenonceaux





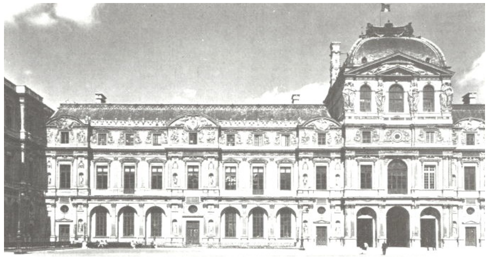
Chateau de Chambord

- Designed by an Italian, Domenico da Cortona
- Semi-fortified palace, most famous in Loire district



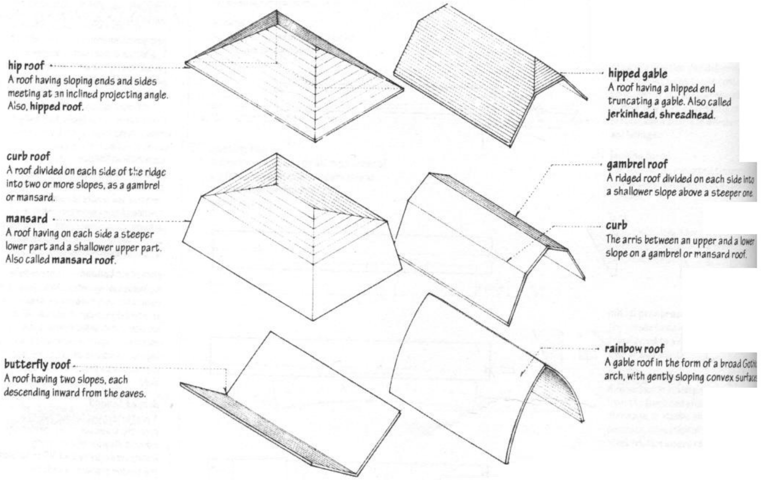
Chateau de Maisons

- One of the most harmonious of all chateaux
- Designed by Francois Mansart on a symmetrical E-plan



Palaise du Louvre, Paris

- Built from Francis I to Napoleon III
- Together with Tuilleries, 45 acres constituting one of the most imposing palaces in Europe



hip roof
A roof having sloping ends and sides meeting at an inclined projecting angle. Also, **hipped roof**.

curb roof
A roof divided on each side of the ridge into two or more slopes, as a gambrel or mansard.

mansard
A roof having on each side a steeper lower part and a shallower upper part. Also called **mansard roof**.

butterfly roof
A roof having two slopes, each descending inward from the eaves.

hipped gable
A roof having a hipped end truncating a gable. Also called **jerkinhead**, **shreadhead**.

gambrel roof
A ridged roof divided on each side into a shallower slope above a steeper one.

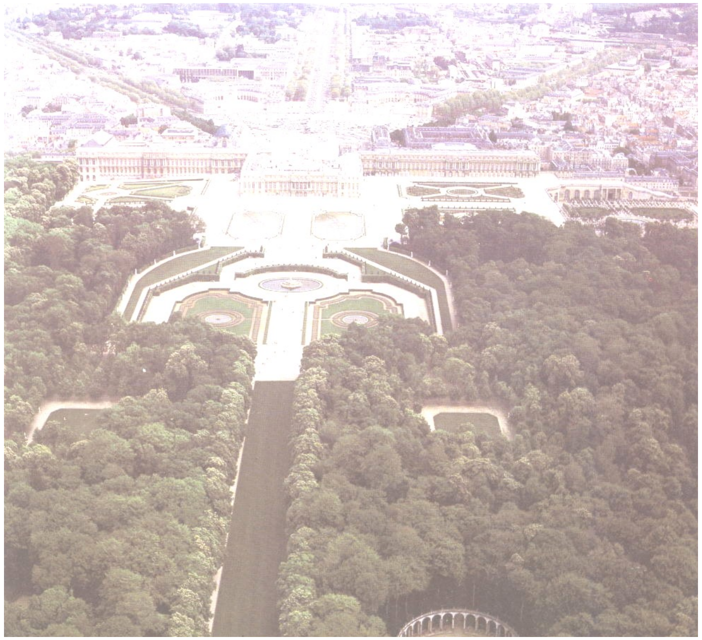
curb
The arris between an upper and a lower slope on a gambrel or mansard roof.

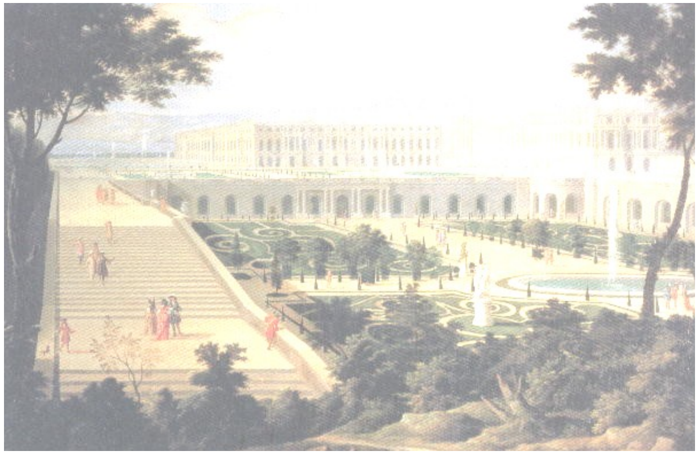
rainbow roof
A gable roof in the form of a broad Got arch, with gently sloping convex surfac

Renaissance

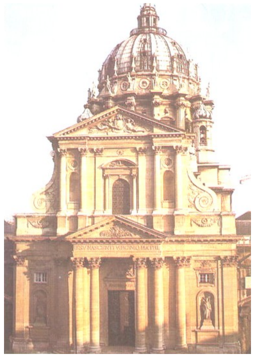
Petit Trianon, Versailles

- Designed by JA Gabriel for Louis XV
- One of most superb pieces of domestic architecture of the century



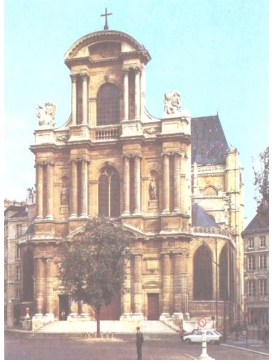


CHURCHES



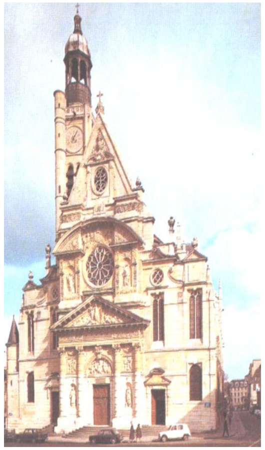
Church of the Val de Grace, Paris

- Projecting portal by Francois Mansart, dome by Lemercier



St. Gervais, Paris

- earliest wholly-classical church facade
- by Salomon de Brosse



St. Etienne du Mont, Paris

Renaissance

ENGLAND

PERIODS

ELIZABETHAN (1558 to 1603 AD)

- During the reign of Queen Elizabeth
- Establishment of Renaissance style in England, followed Tudor architecture
- Transition style with Gothic features and Renaissance detail

JACOBEAN (1603 to 1625 AD)

STUART (1625 to 1702 AD)

- 1st Phase: Inigo Jones was influenced by Italian Renaissance
- 2nd Phase: Christopher Wren was influenced by French Renaissance

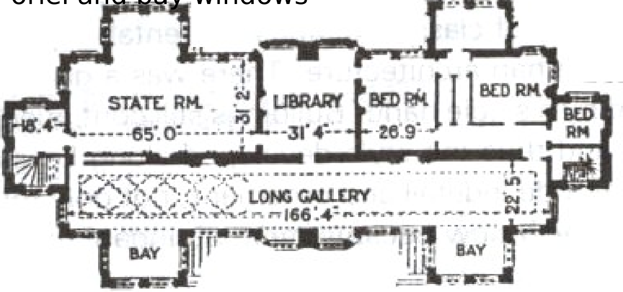
GEORGIAN (1702 to 1830 AD)

ELIZABETHAN MANSIONS

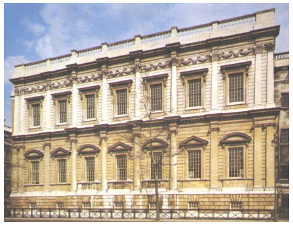
- Statesmen, merchants and gentry built mansions in the countryside to suit their positions
- E-shaped plan or H-shaped plan

Hardwick Hall, Derbyshire

- Great hall, kitchen and office, living rooms, grand staircase, long gallery, withdrawing room or solar, towers, gables, parapets, balustrades, chimney stacks, oriel and bay windows

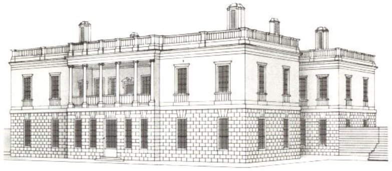


STUART BUILDINGS



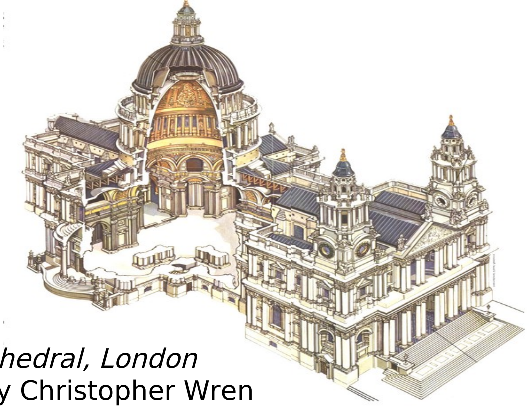
Banqueting House, Whitehall, London

- Designed by Inigo Jones



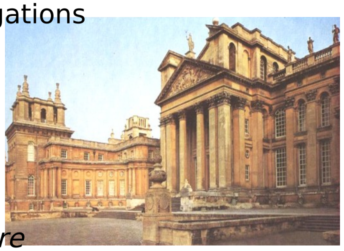
Queen's House

- Influenced by Palladian architecture



St. Paul's Cathedral, London

- Designed by Christopher Wren
- Area of 6000 sq.m and a large central space under dome for big congregations



GEORGIAN HOUSES

Blenheim Palace, Oxfordshire

- Most monumental mansion in England
- Example of central block with wings

Renaissance

SPAIN & PORTUGAL

EARLY PERIOD (1492 to 1556 AD)
- Grafting Renaissance details unto Gothic forms

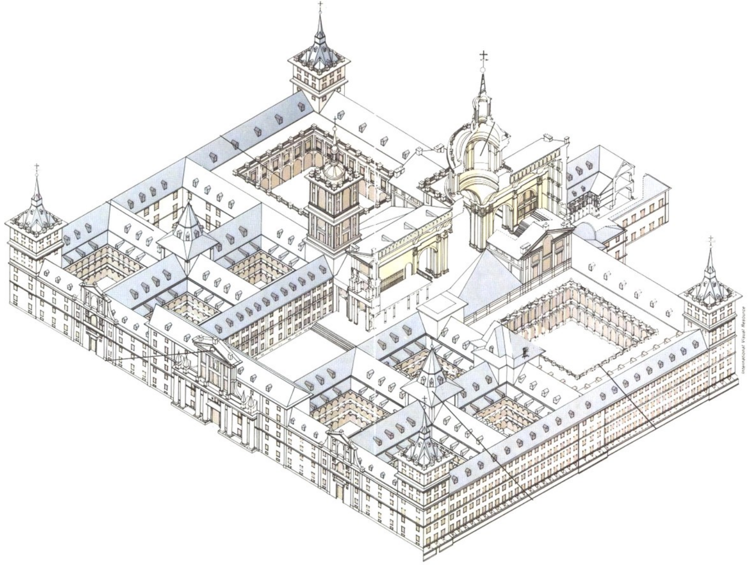
In Spain:
- Plateresque, rich and poetic style, so named for its similarity to silversmiths' work – plateria
- Influenced by Moorish art - extremely florid and decorative, from the minuteness of detail

in Portugal:
- Manueline Style (from King Manuel I, 1495 to 1521 AD)
- Decorative rather than structural in character, inspired by the voyages of discoverers

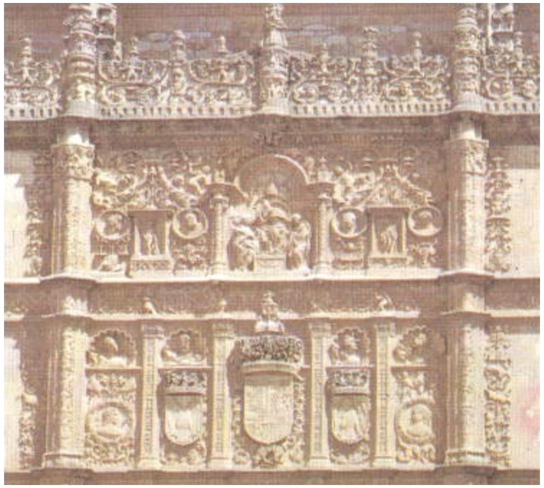
CLASSICAL PERIOD (1556 to 1690 AD)
- Close adherence to Italian Renaissance art

BAROQUE PERIOD (1650 to 1750 AD)
- Classical rules disregarded
- Churrigueresque, fantastically extravagant expression, by Jose de Churriguera, (1650 to 1723 AD)

ANTIQUARIAN PERIOD (1750 to 1830 AD)
- Returned to ancient classical models



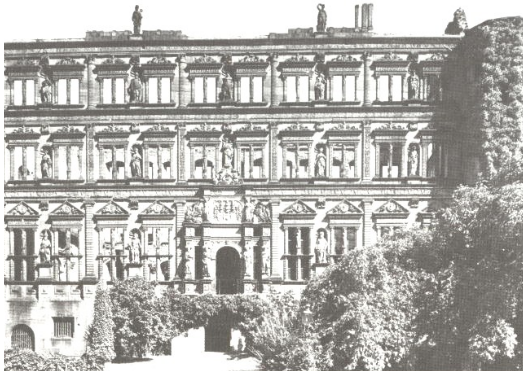
The Escorial, Madrid
- Austere group of buildings, composed of the monastery, college, church and palace with state apartments



The University, Salamanca
- The facade is a Plateresque design masterpiece
- Admirable craftsmanship

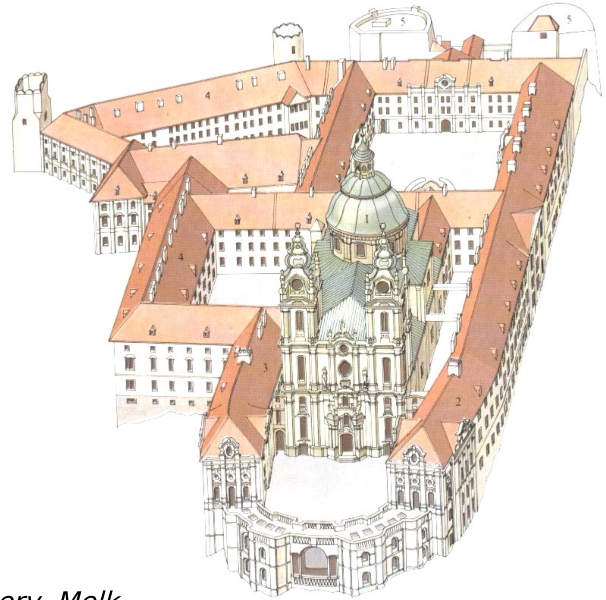
Renaissance

GERMANY



Heidelberg Castle

- Exemplifies progressive developments of the Early Renaissance on the castle
- Saalbau, Heinrichsbau, Friedrichsbau
- Great watchtower and irregular court



Monastery, Melk

- One of most striking Baroque monuments

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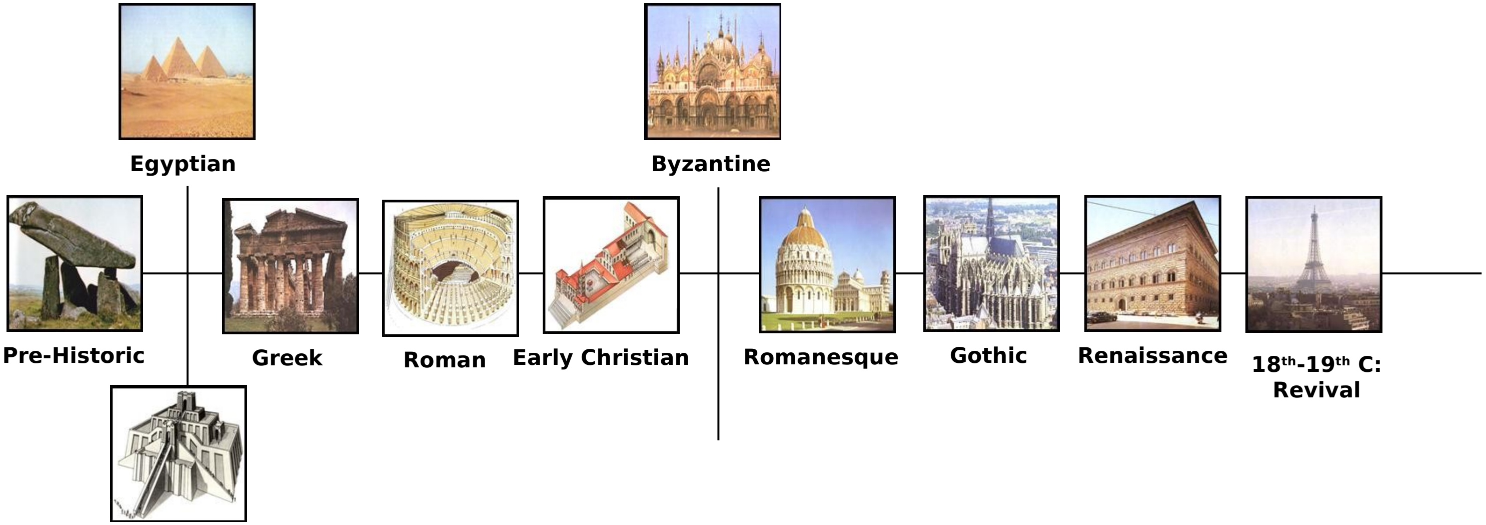
20TH C MODERN
ISLAMIC
INDIAN
CHINESE & JAPANESE
FILIPINO

18th-19th C: Revival

The Historical Timeline of Architecture



Egyptian

Byzantine

Pre-Historic

Greek

Roman

Early Christian

Romanesque

Gothic

Renaissance

18th-19th C: Revival

Near East

history of architecture

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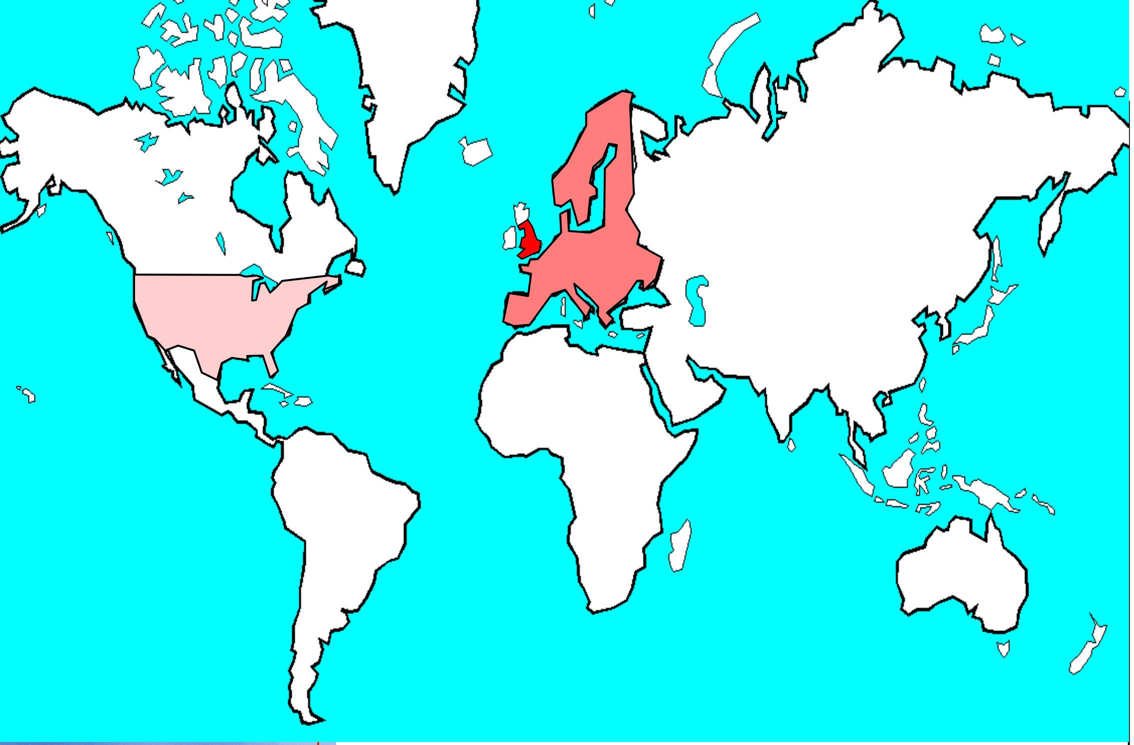
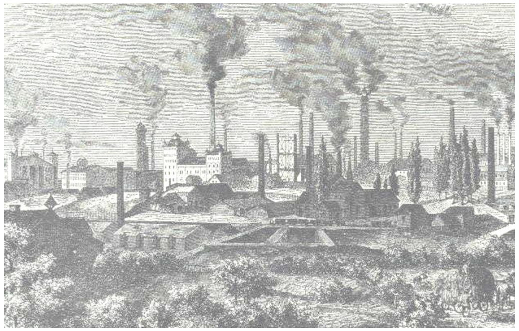


INFLUENCES



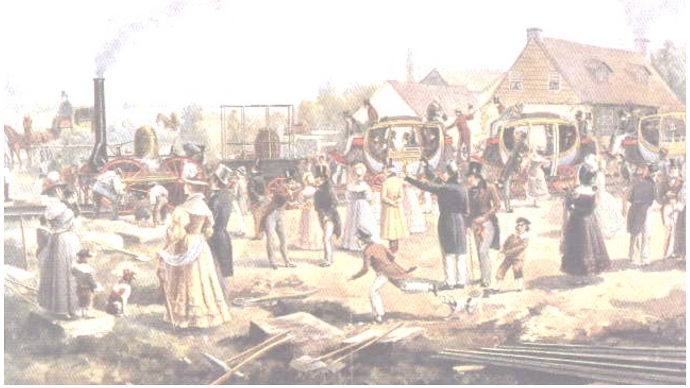
HISTORY

- Revolutionary changes affecting every aspect of life

- The Industrial Revolution started in Britain - new machines and innovative processes helped change nations from agricultural to industrial ones
- Spread to continental Europe and to North America
- Created a new type of worker – the wage laborer

- Home-based cottage industries were rendered obsolete by the invention of the steam engine by Watt in 1785
- Goods could be made more cheaply
- Factories sprouted all over Britain where coal was available to fuel the engines, other countries followed suit

Social and Political changes:
- Centuries-old monarchies gave way to democratic institutions – American Declaration of Independence (1776) and French Revolution (1789)
- Urbanization and rise in population
- Growth of the *bourgeoisie* or middle class
- Professionals and businessmen



Technological innovations:
- Railways to easily transport people and goods
- Improved drainage and sanitation
- Coal-gas and gas lamps, later electricity
- Lift or elevator
- Growth of communications
- Ship-building and the Suez Canal
- International exhibitions of science and industry

18th-19th C: Revival

ARCHITECTURAL CHARACTER

- The need to create an imposing effect – research into old styles
- Conservation of historic relics or monuments had begun
- Interest in Classicism, in the Romanesque, the Gothic, the Renaissance, the Baroque
- “age of revivals” - eclecticism, taste for exotic forms, combining native and foreign styles

- “age of innovation” - use of newly available materials
- Form follows Function (Louis Sullivan)

Due to inventions in metallurgy and construction, new materials became available for building:
- structural iron and cast-iron
- iron and glass
- zinc
- steel
- reinforced concrete – first used by Auguste Perret

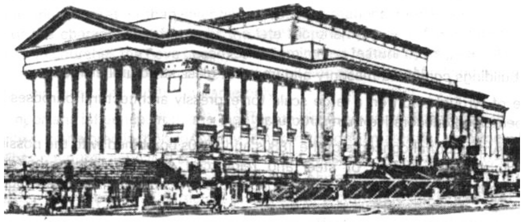
New building types:
- Industrial Buildings and Warehouses
- Houses of Parliament
- Railways and Transport Stations – spread all over Europe
- Museums – took the place of aristocratic private collections of art
- Department Stores – in Paris, London, Brussels, other commercial areas
- Hospitals, Public Banks, Fire and Police Stations, Exhibition Halls

New emerging style:
- The Arts and Crafts Movement in Britain
- in the tradition of craft guilds in the Middle Ages
- led by artist-craftsman William Morris, architect Philip Webb and writer John Ruskin
- furniture, glassware, fabrics, wallpaper, etc – decorated with repeating stylized floral patterns

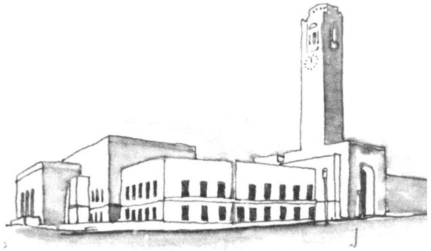
Periods in Britain:

EARLY VICTORIAN (1830 to 1850 AD)
HIGH VICTORIAN (1850 to 1870 AD)
LATE VICTORIAN & EDWARDIAN (1870 to 1914 AD)
AFTERMATH (after World War I)

The Clifton Suspension Bridge, Bristol
- Designed by Isambard Brunel
- Pylons of Egyptian character



St. George's Hall, Liverpool
- Designed by Harvey Lonsdale Elmes
- Most magnificent Neo-Classical monument in Britain



City Hall, Swansea
- Designed by Sir Percy Thomas

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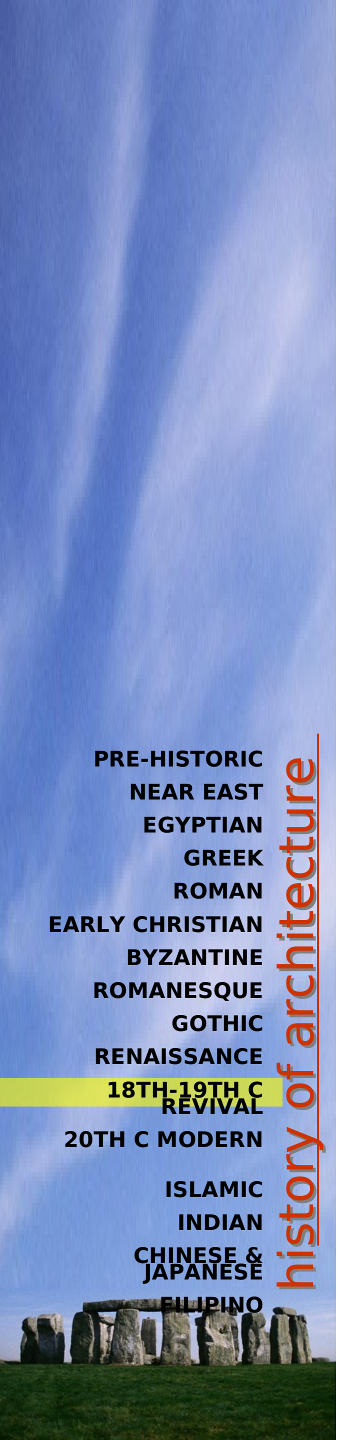
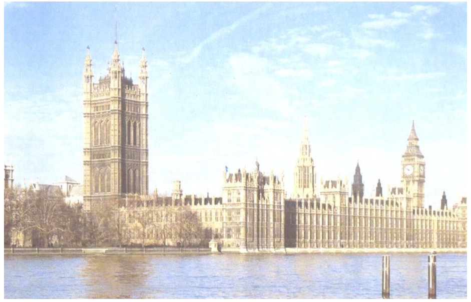
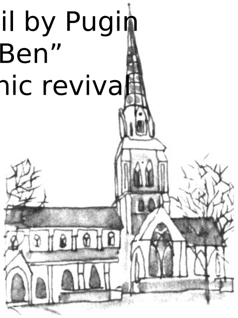


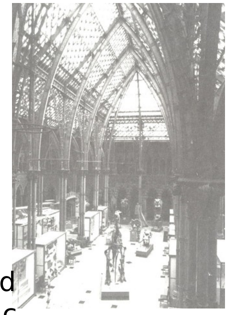
18th-19th C: Revival



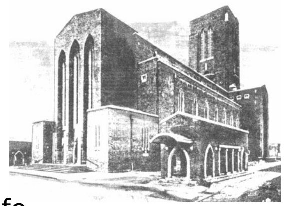
Westminster New Palace (Houses of Parliament), London
- Designed by Sir Charles Barry
- Non-classical design: Gothic detail by Pugin
- Victoria tower, Clock tower “Big Ben”
- First major public building of Gothic revival



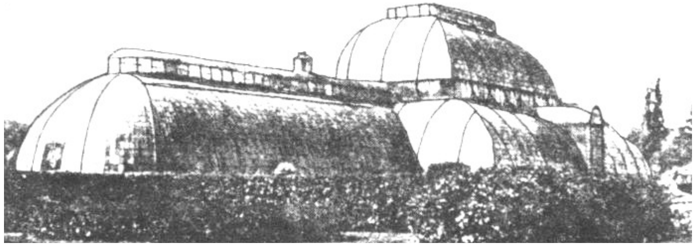
St. Giles, Cheadle, Staffs
- Designed by Pugin



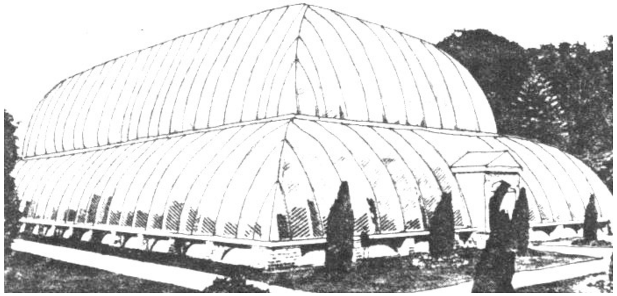
The University Museum, Oxford
- Designed by Benjamin Woodward
- landmark of High Victorian Gothic



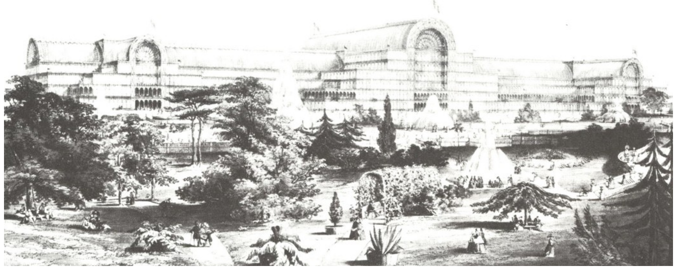
The Cathedral, Guilford
- Designed by Sir Edward Maufe



The Conservatory, Carlton House, London
- Cast-iron for structural and decorative purpose



Palm House, Royal Botanic Gardens, Kew
- Designed by Decimus Burton and Richard Turner



Crystal Palace, London
- Designed by Sir Joseph Paxton
- One of the most remarkable buildings in 19th century Britain – free of any traditional precedent
- Housed the Great Exhibition of 1851, erected in Hyde Park, moved to Sydenham in 1852 to 1854

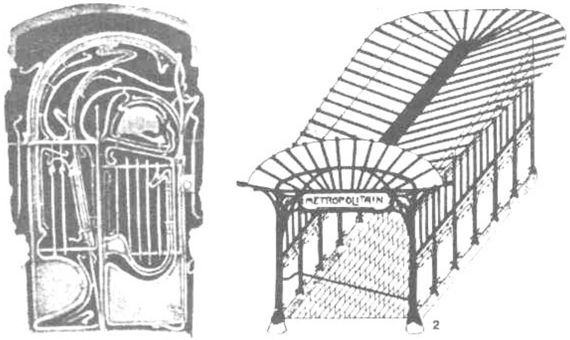
18th-19th C: Revival

Periods in Continental Europe:

1850 to 1870 AD
- Comparable to High Victorian in Britain
- Renaissance and Gothic revival
- Structural use of iron

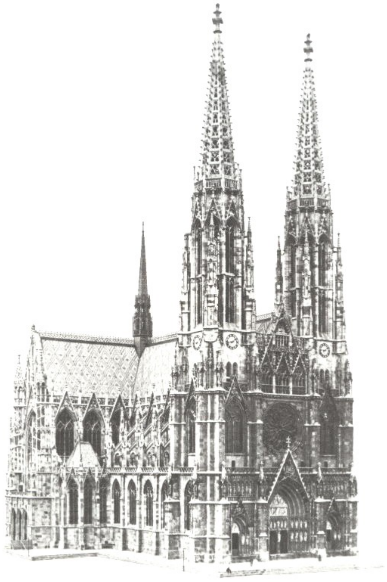
1870 to 1914 AD
- Use of metals was intensified, especially in exhibitions
- Antique forms instead of Renaissance

ART NOVEAU (1893 to 1906 AD)
- Derived from the "Arts and Crafts Movement" in Britain
- An

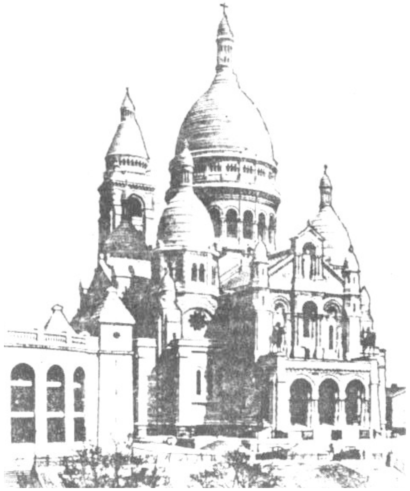


- Deliberate simplification of structural elements in buildings and interiors, handmade objects and furniture
- Forms of nature for ornamentation in the facade
- Floral style, freely-shaped writhing vegetal forms

Versions:
- France – Le Modern Style
- Germany – Jugendstil
- Austria – Sezessione
- Italy – Stile Liberty
- Spain - Modernismo

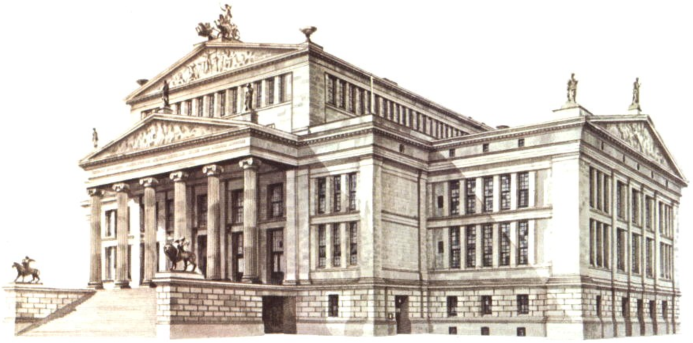


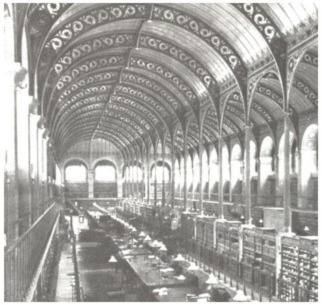
The Votivkirche, Vienna
- Neo-Gothic by Heinrich von Ferstel

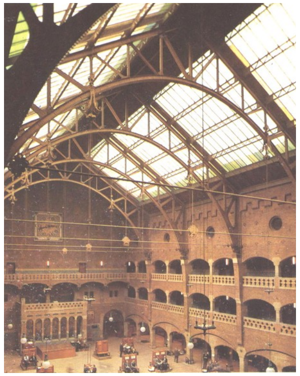


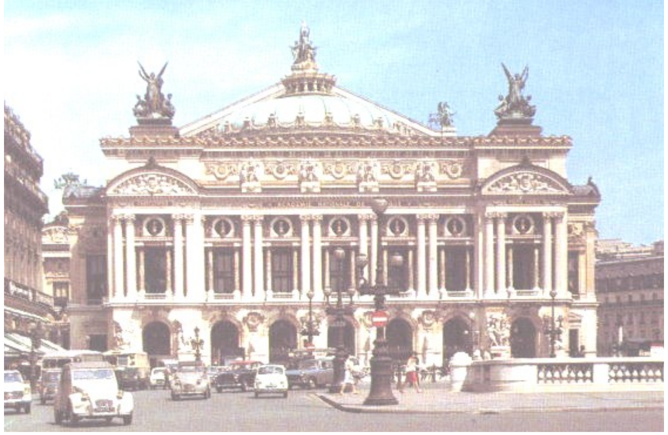
The Church of Sacre-Coeur, Paris
- Neo-Byzantine by Paul Abadie

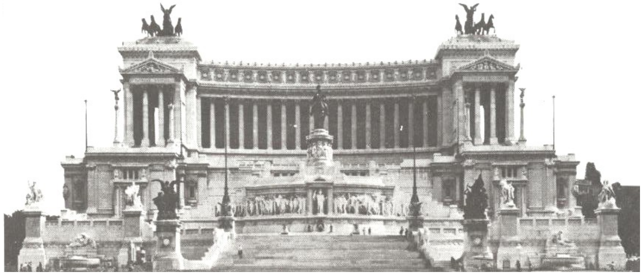
18th-19th C: Revival


The Schauspielhaus, Berlin
- Greek-revival style by KF von Schinkel


The Library of St. Genevieve, Paris
- Neo-Renaissance by Henri Labrouste


The Stock Exchange, Amsterdam
- Neo-Romanesque by HP Berlage


The Opera House, Paris
- Neo-Baroque by Charles Garnier


The Victor Emanuel II Monument, Rome
- Neo-Classical by Giuseppe Sacconi

Others:
Reighstag, Berlin – Paul Wallot
Parliament, Budapest – Imre Steindl
Dresden Opera - neo-Renaissance by Gottfried Semper
The Altes Museum, Berlin - Greek-revival style
Thorwaldsen Museum, Copenhagen - Greek-revival
The Opera House, Cologne - French Neo-Baroque
The Post Savings Bank, Vienna - Art Noveau by Otto Wagner

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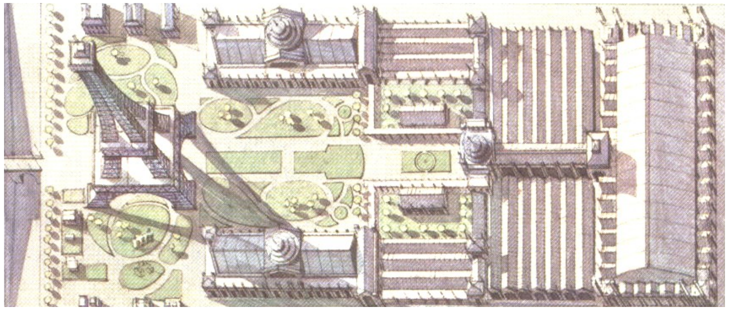
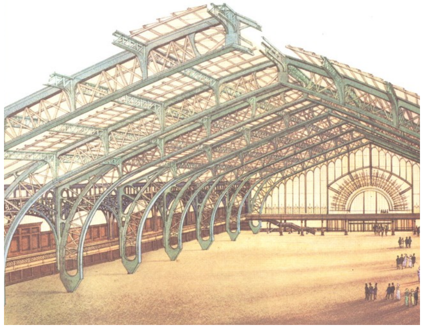
history of architecture

18th-19th C: Revival

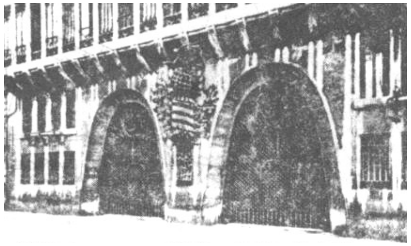


The Entrance Pavilion, Exposition Universelle 1889
- Designed by Gustav Eiffel and maurice koechlin
- Extensive use of iron, 300m high

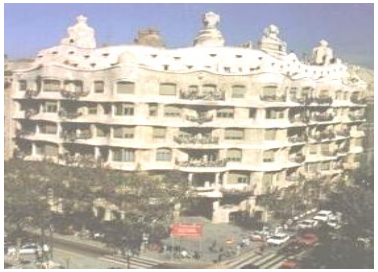


The Galerie des Machines, Exposition Universelle 1889
- By Victor Contamin, engineer, and CLF Dutert, architect

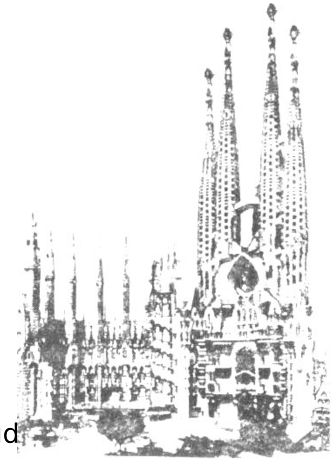
Art Noveau Architects:
- Victor Horta in Brussels
- Antoni Gaudi in Barcelona
- Raimondo D’Aronco in Constantinople and Turin
- Joseph Hoffman in Vienna
- Charles Rennie Mackintosh in Glasgow



The Palau Guell, Barcelona
- Designed by Antoni Gaudi
- Seems to presage Art Noveau in its forms



Casa Mila, Barcelona
- Designed by Antoni Gaudi



Sagrada Familia, Barcelona
- Art Noveau by Antoni Gaud

18th-19th C: Revival

Periods in America:

POST-COLONIAL (1790 to 1820 AD)
- Neo-Classic elements

FIRST ECLECTIC PHASE (1820 to 1860 AD)
- Greek-revival style, also Gothic and Egyptian styles

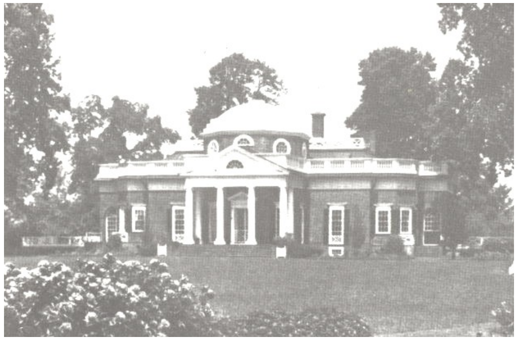
SECOND ECLECTIC PHASE (1860 to 1930 AD)

1st Stream:
- Romanesque and Gothic inspiration
- Influenced by Arts and Crafts movement in England
- HH Richardson, Louis Sullivan and Frank Lloyd Wright

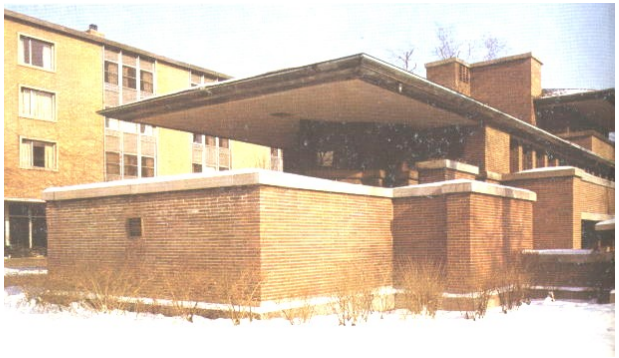
2nd Stream:
- Italian and French Renaissance, ancient Greek and Roman, late Gothic inspiration
- Influenced by the Ecole des Beaux-Artes

- Structural experiment and achievement: metal frame construction, non-load-bearing curtain wall, elevators
- Produced the skyscraper - America's single greatest contribution to architecture

The White House, Washington DC
- President’s official residence
- Designed by James Hoban, Irish architect
- English Palladian style



Monticello, near Charlottesville, Virginia
- Designed by Thomas Jefferson, 3rd American president
- Palladian style

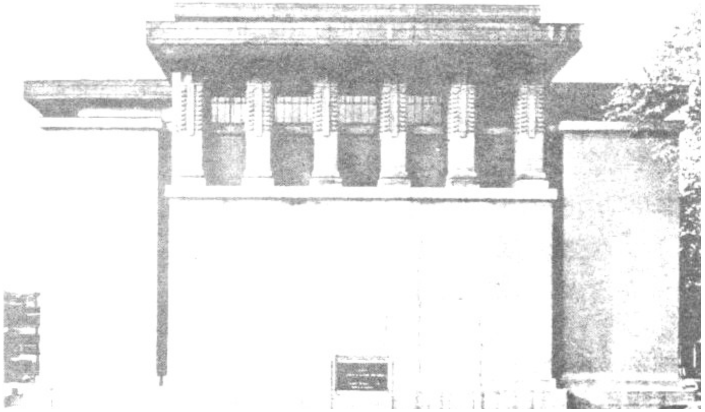


Robie House, Chicago
- Designed by Frank Lloyd Wright

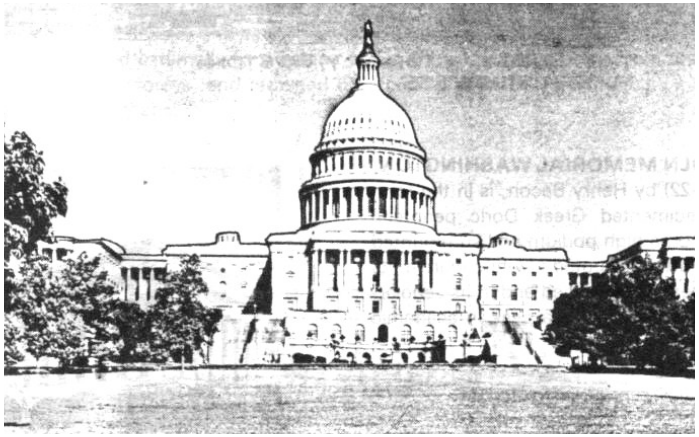
Winslow House, River Forest, Illinois (aka Prairie House)
- First important work of Frank Lloyd Wright

Taliesin East, Spring Green, Wisconsin
- Designed by Frank Lloyd Wright

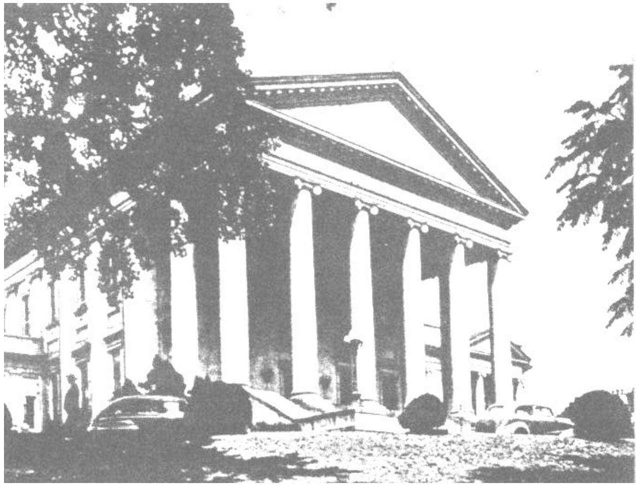
18th-19th C: Revival



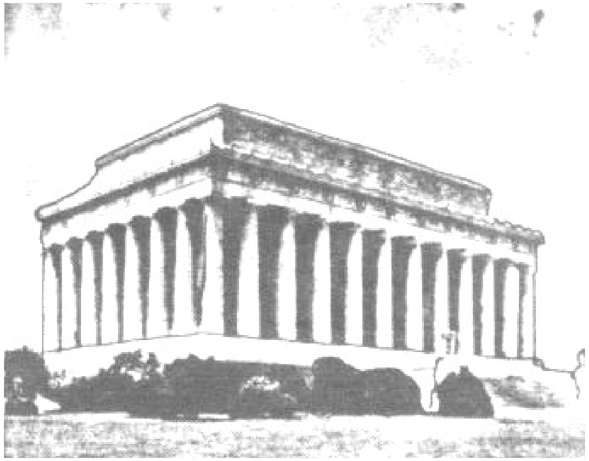
Unity Temple, Oak Park, Illinois
- by Frank Lloyd Wright



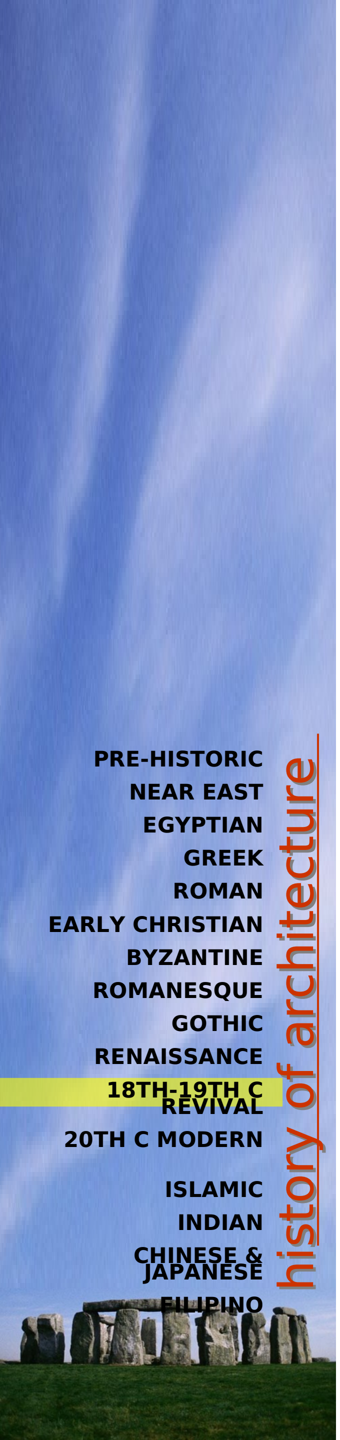
The United States Capitol, Washington DC
- First designed by Dr. William Thorton along Palladian lines
- Numerous modifications after the war
- Crowning dome
- One of the world's best known buildings



The State Capitol, Richmond, Virginia
- Designed by Thomas Jefferson
- First neo-classical monument in America, based on Maison Caree, Nimes
- Ionic order



Lincoln Memorial, Washington DC
- Designed by Henry Bacon
- Greek Doric style



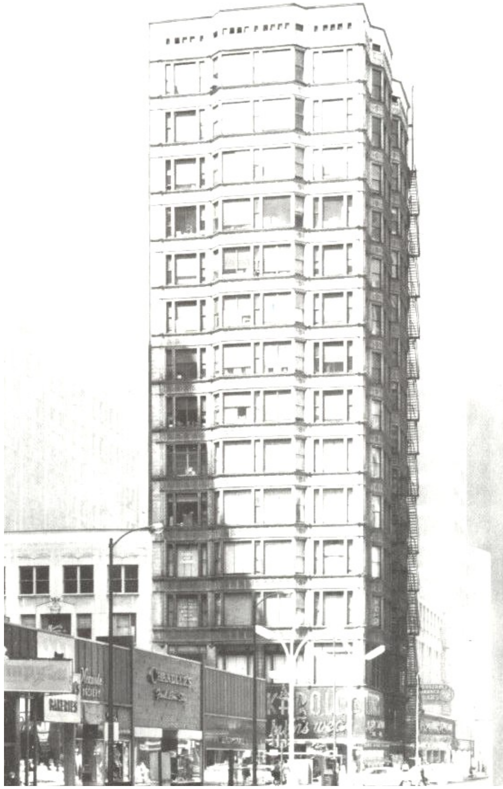
18th-19th C: Revival

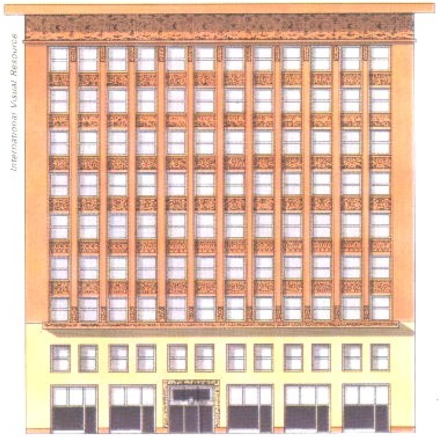
Merchants Exchange, Philadelphia
- Designed by William Strickland
- Greek-revival

The Marshall Field Wholesale Warehouse, Chicago, Illinois
- Designed by HH Richardson

The Auditorium Building, Chicago, Illinois
- Designed by Dankmar Adler and Louis Sullivan
- Neo-Byzantine interior

The Reliance Building, Chicago
- Designed by Burnham and Root





The Monadnock Building, Chicago
- Designed by Daniel Burnham

The Second Leiter Building, Chicago
- Metal-framed building

The Gace Building, Chicago
- Designed by Louis Sullivan and Holabird and Roche

The Schlesinger-Mayer Store
- Designed by Louis Sullivan
- Suggestion of Art Noveau style

The Larkin Soap Co. Building, Buffalo, NY
- Designed by Frank Lloyd Wright

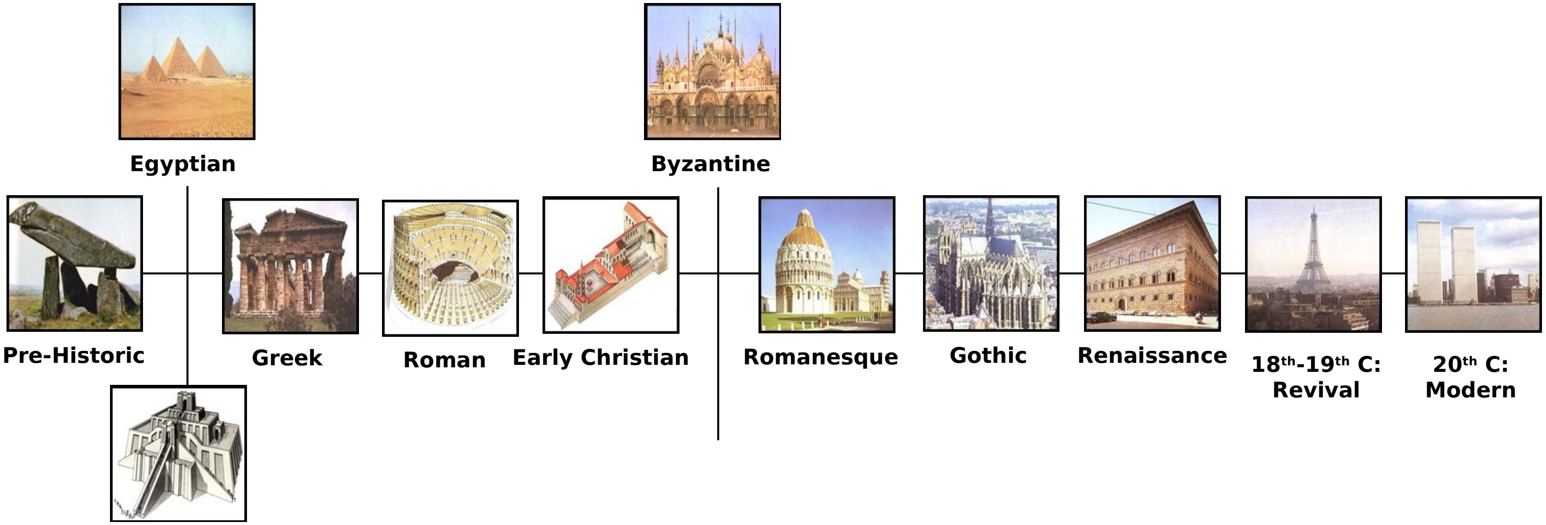
The Woolworth Building, NY
- Designed by Cass Gilbert
- Gothic style

The Wainwright Building, St. Louis
- Designed by Adler and Sullivan

Empire State Building
- Designed by Shreve, Lamb and Harmon
- 85 storeys

20th C: Modern

The Historical Timeline of Architecture



Pre-Historic

Egyptian

Near East

Greek

Roman

Early Christian

Byzantine

Romanesque

Gothic

Renaissance

18th-19th C: Revival

20th C: Modern

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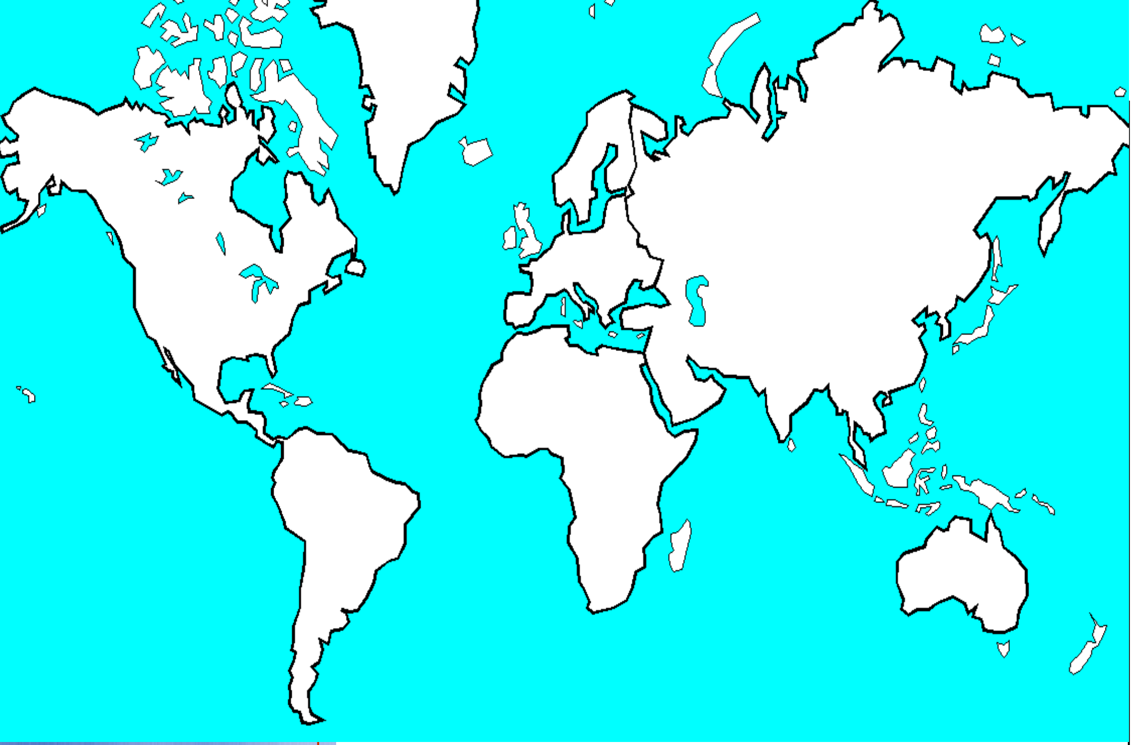

20th C: Modern

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INFLUENCES

HISTORY

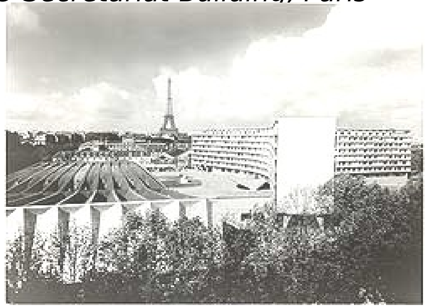
More innovations:
- Curtain wall
- Steel and plate-glass
- Folded slab by Eugene Freyssinet
- Flat slab by Robert Maillart
- Laminated timber

- Functionalism in design

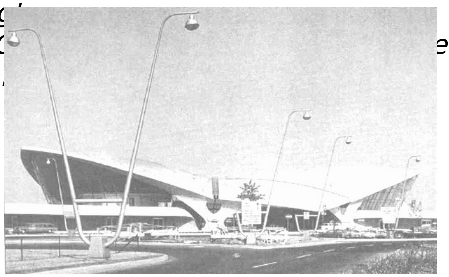
FAMOUS ARCHITECTS

Marcel Breuer
- Architect and designer
- Best known for the design of tubular steel Wassily Chair
- Studied at the Bauhaus - become director of the school's furniture department in 1924
- Designed a series of noted structures including innovative houses and the Whitney Museum of Art

UNESCO Secretariat Building, Paris



Eero Saarinen
Works include:
- Dulles International Airport Building, near Washing
- The C
er, Warren, Michiga



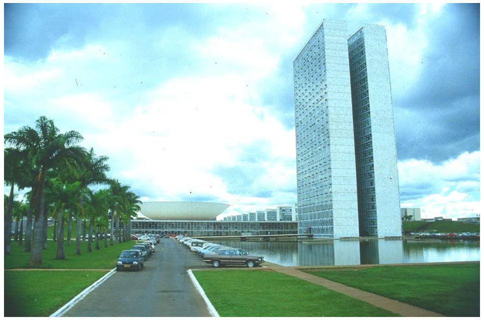
TWA Terminal, JFKennedy Airport
- Undulating shape was meant to evoke the excitement of high speed flight
- Even interior details: lounges, chairs, signs, and

20th C: Modern

Oscar Niemeyer

- Worked with city planner Lucio Costa to conceive and build Brasilia, Brazil's capital in a record time of just four years
- Functionality and the use of pre-stressed concrete dominate his designs
- Also designed the cathedral, the national theater and the presidential palace

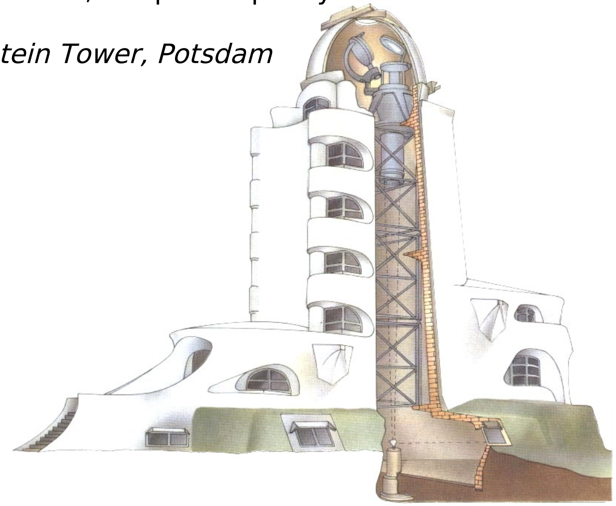
Parliament Building, Brasilia



Eric Mendelsohn

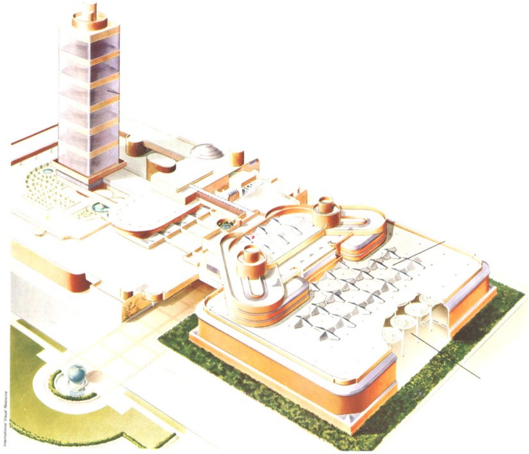
- Dynamic, sculptural quality

Einstein Tower, Potsdam

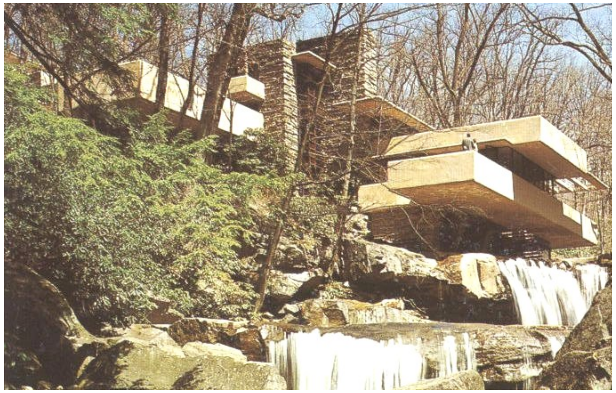


Frank Lloyd Wright

Johnson Wax Co. Building



Falling Water, Pennsylvania



Also designed:
- *Solomon R. Guggenheim Museum, NY*
- *Imperial Hotel in Tokyo* – he played a decisive role in the renewal of Japanese architecture

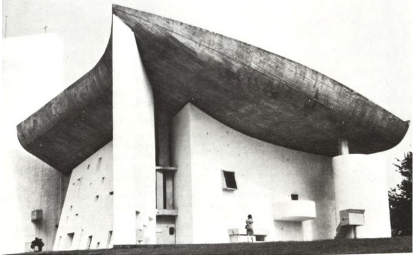
20th C: Modern

le Corbusier

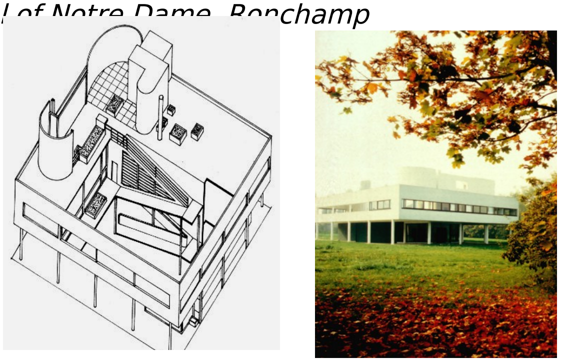
- Based in Switzerland and France, he dominated European scene for nearly half-a-century
- He believed that "the house is a machine to live in" - the program for building a house should be set out with the same precision as that for building a machine

Five Points of New Architecture

1. Framework structurally independent of walls
2. Free-standing façade - the free facade, the corollary of the free plan in the vertical plane
3. Roof garden - restoring, the area of ground covered by the house
4. Open planning - the free plan, achieved through the separation of the load-bearing columns from the walls subdividing the space
5. Cube form elevated on stilts or columns - pilotises elevating the mass off the ground



Chapel of Notre Dame, Ronchamp



Villa Savoye at Poissy

- Realization of his 'five points' of new architecture

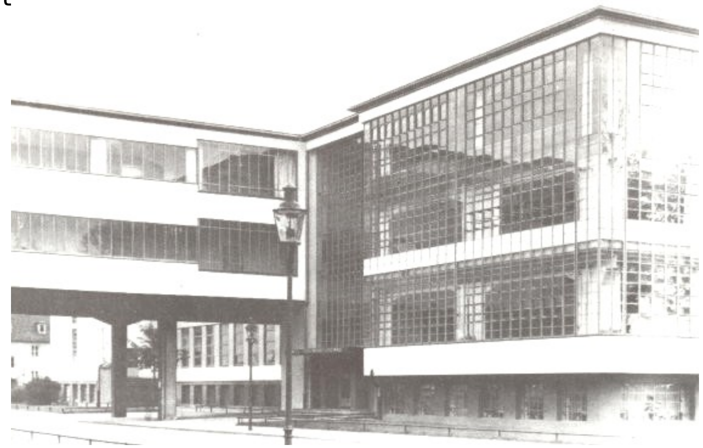
Buckminster Fuller

- Created the Dymaxion House, the first “machine for living” - a portable home inside from metal alloys and plastics
- Designed all necessary mechanical systems and devices in the center of the building, with living spaces around it, open to the arrangement tastes of the owner

The United States Pavilion at Expo 67, Montreal

Walter Gropius

- Created prototype of modern architecture: free-standing glass sheath suspended on a structural framework - aka curtain wall
- First used this on Hallidie Building, San Francisco in 1918
- Established Bauhaus, a school or training intended to relate art and architecture to technology and the practical needs of modern life



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20TH C MODERN
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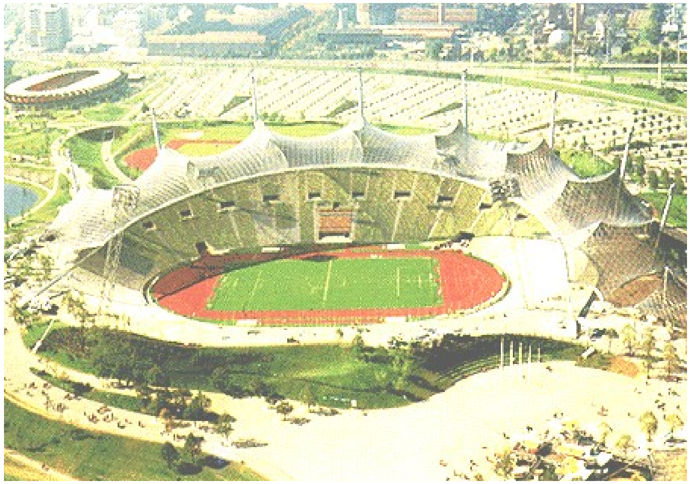
FILIPINO

20th C: Modern

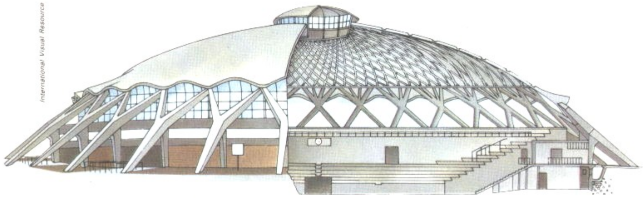
Frei Otto
- The seminal figure in the development of tensile architecture
- Veered away from the simple geometric solutions and built organic free forms that could respond to complex planning and structural requirements

Munich Stadium for 1972 Olympic Games

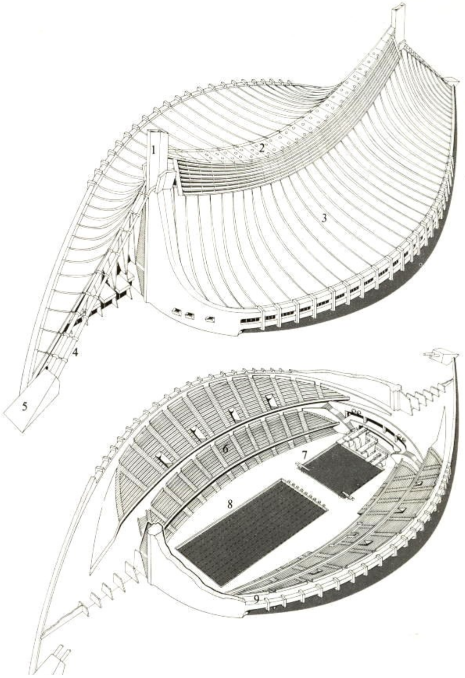


Other Personalities:
- ***Otto Wagner***, Austria
- ***Richard Neutra***, Austria
- ***Rudolf Schindler***, Austria
- ***Peter Behrens***, Germany
- ***August Perret***, France
- ***Hendrik Berlage***, The Netherlands
- ***JJP Oud***, The Netherlands
- ***Victor Horta***, Belgium
- ***Charles Rennie Mackintosh***, UK
- ***CFA Voysey***, UK
- ***Louis Sullivan***, USA
- ***Adolf Meyer***
- ***Tony Garnier***
- ***Max Berg***
- ***Mies van der Rohe***

FAMOUS WORKS

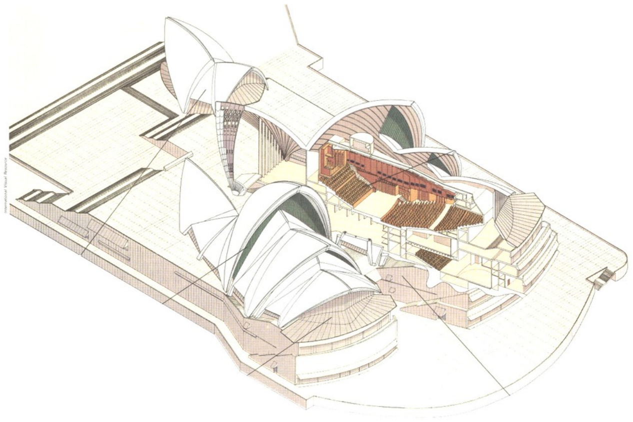


Palazzetto dello Sport for 1960 Rome Olympics
- Designed by Pierre Luigi Nervi and Vitellozzi



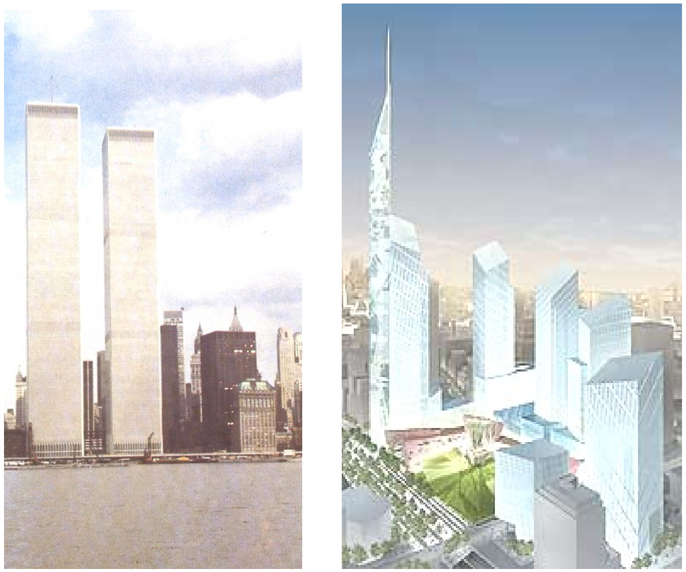
Sports Hall for 1964 Tokyo Olympics
- Designed by Kenzo Tange

20th C: Modern



Sydney Opera House
- Designed by Jorn Utzon of Denmark
- He won the project in a competition for the design of a performing arts complex in Sydney, Australia

The Chrysler Building, NY
- Designed by William van Alen
- Art Deco style



World Trade Center
- Originally designed by Minoru Yamasaki
- Structural steel framing
- Destroyed by the September 11 terrorist attacks
- Redesigned by Daniel Libeskind - 541 m tall

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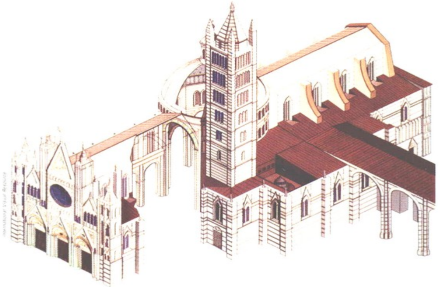

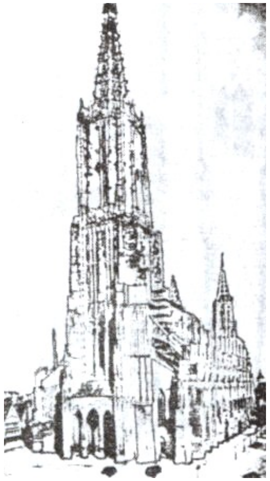

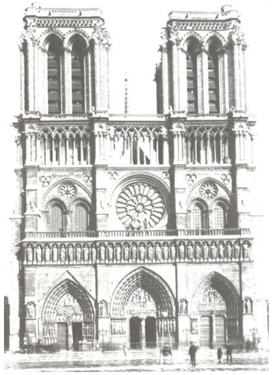

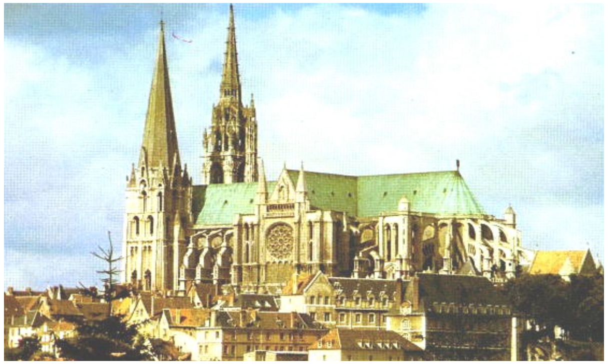

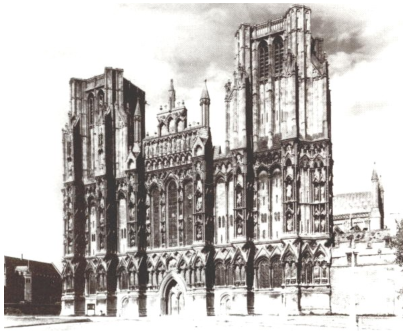

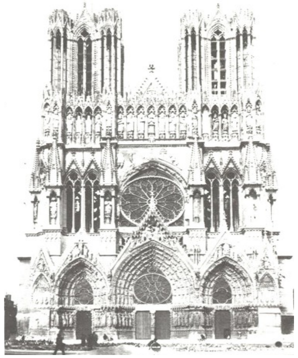

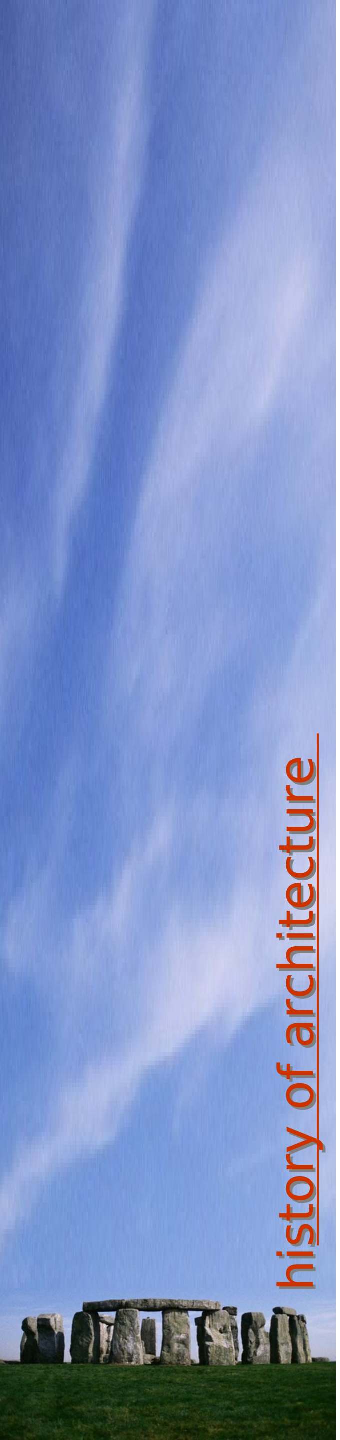

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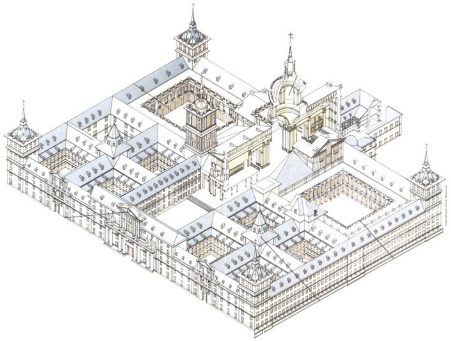

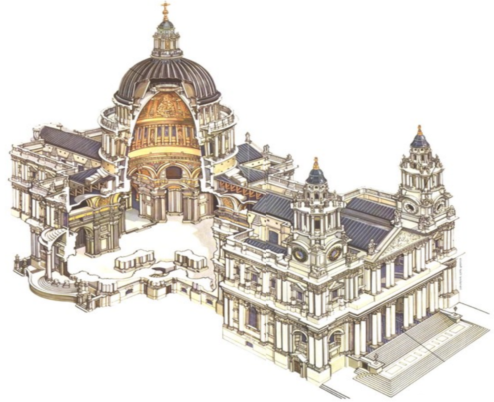

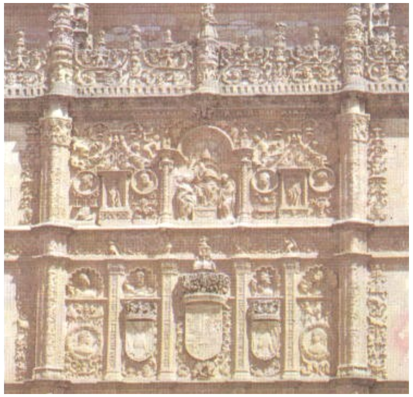

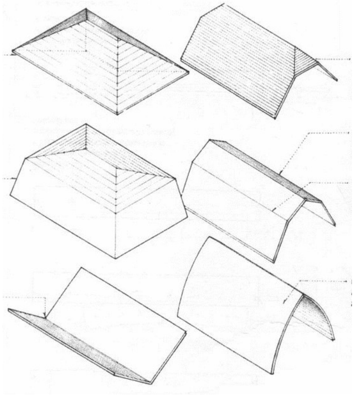

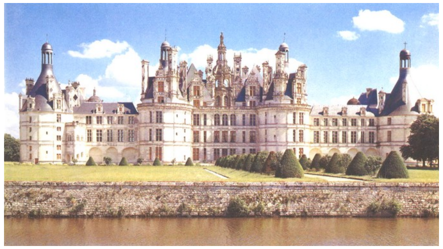

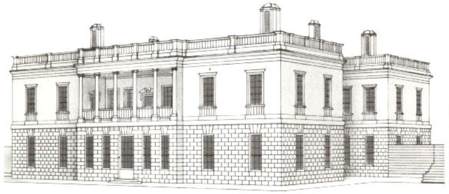

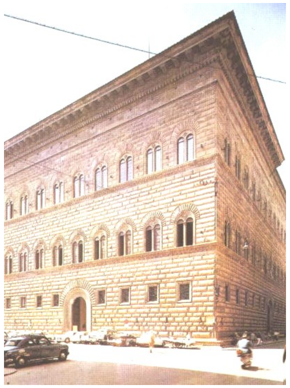

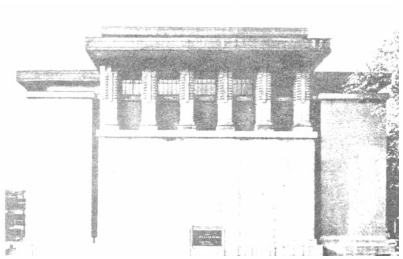

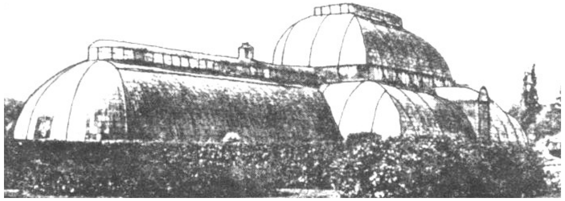

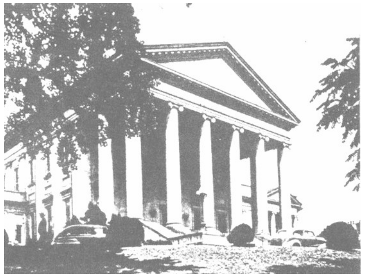

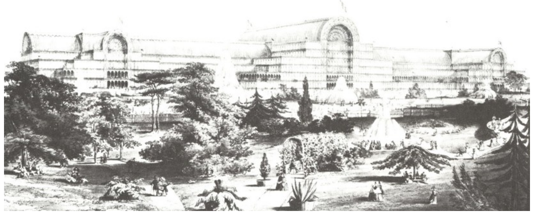

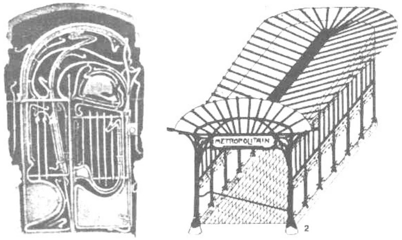
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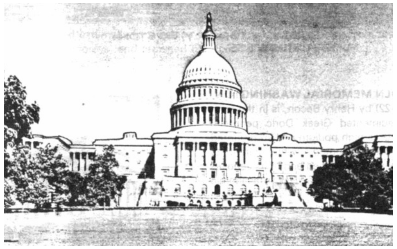

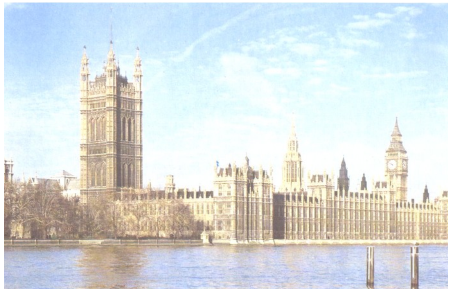

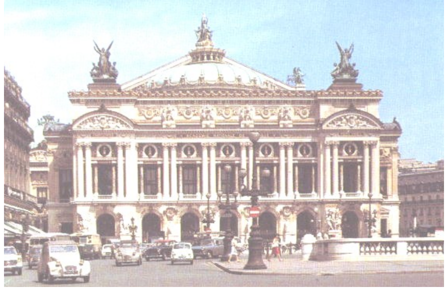

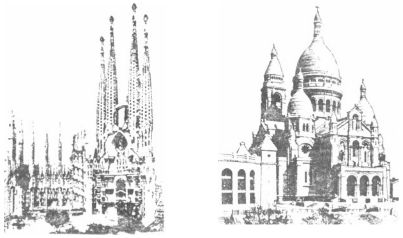

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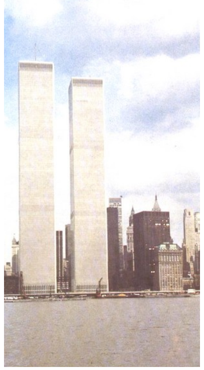
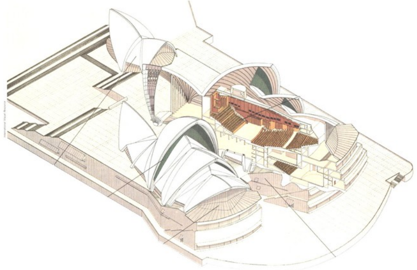
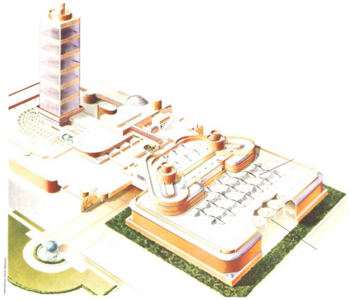
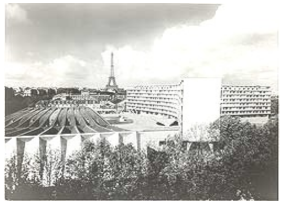
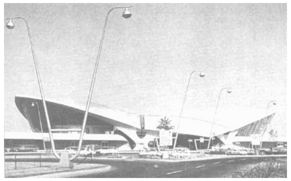
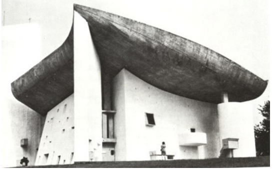


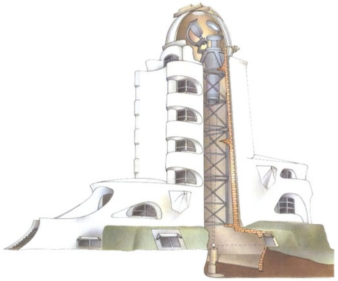


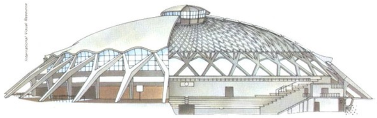


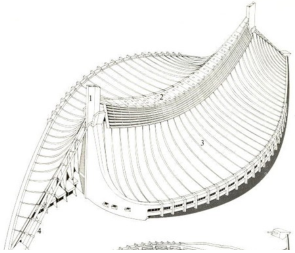


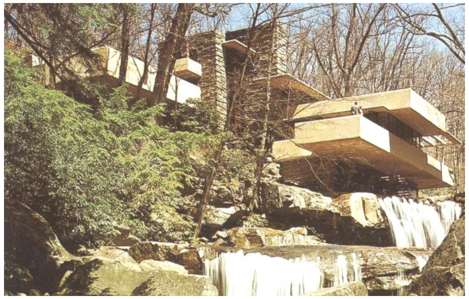






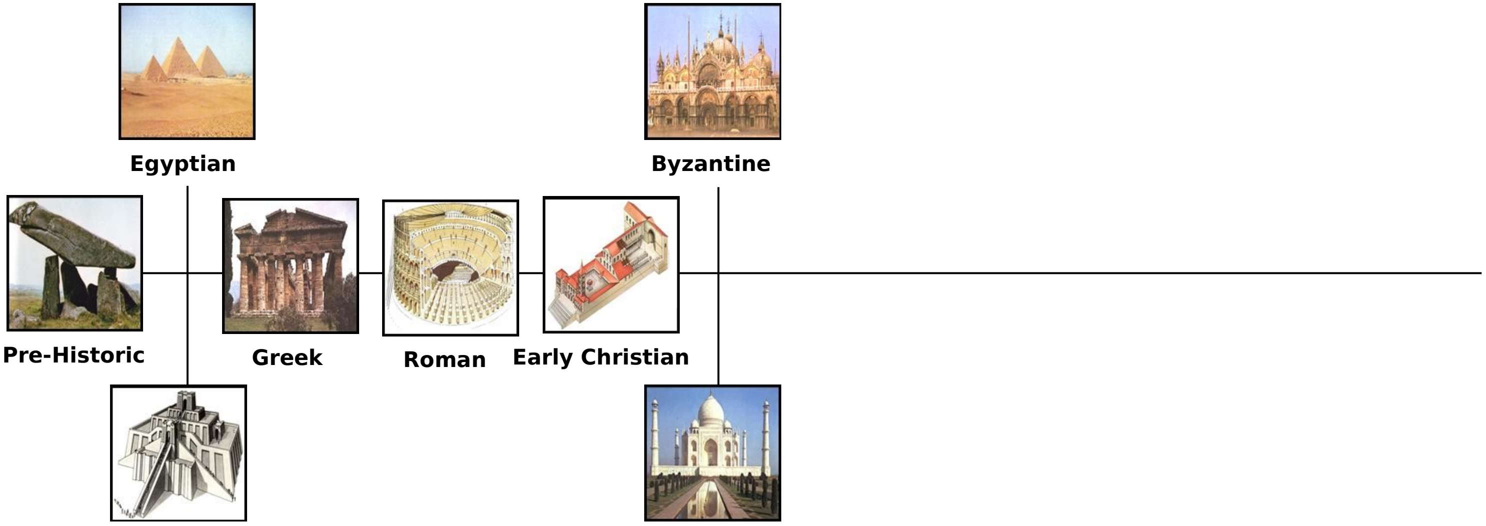






Islamic

The Historical Timeline of Architecture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Pre-Historic
Greek
Roman
Early Christian
Near East
Islamic

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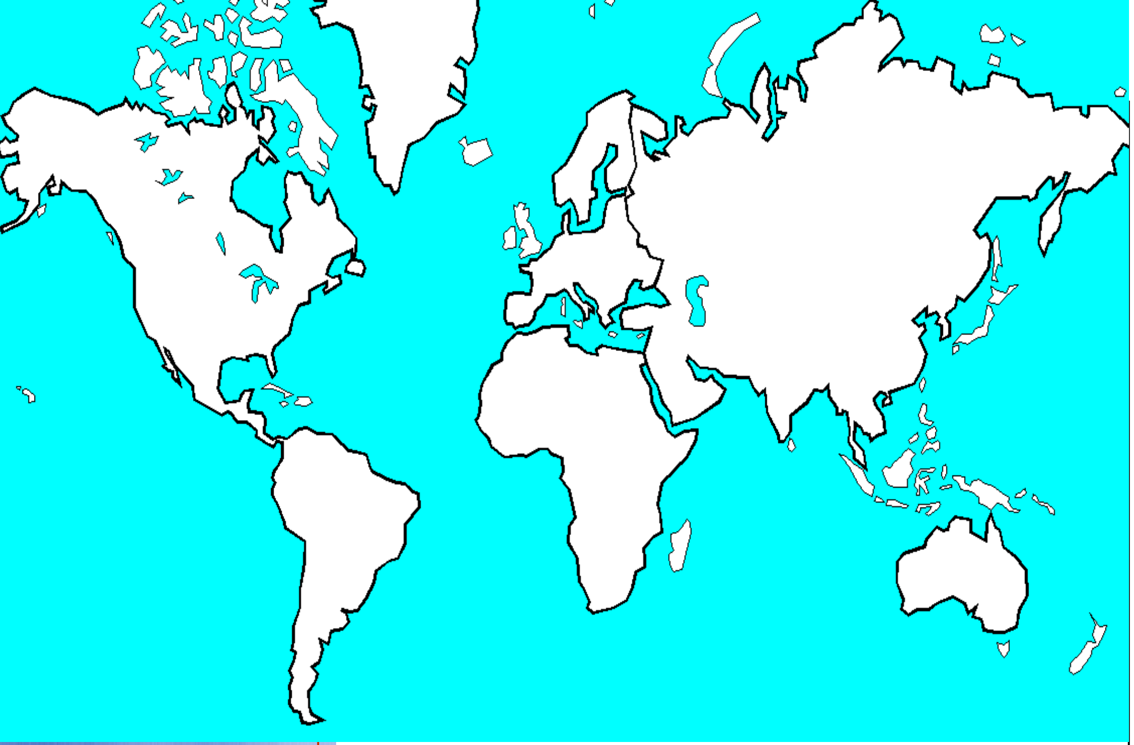

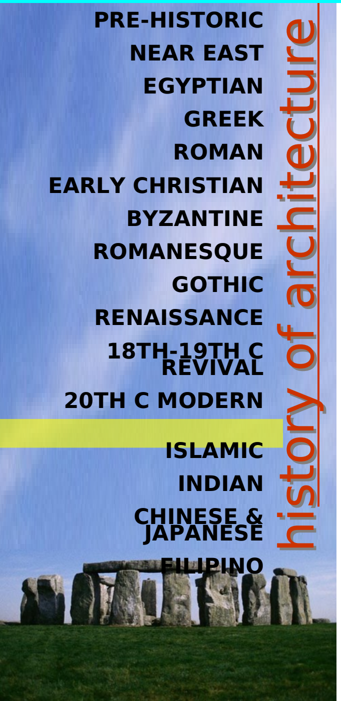

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INFLUENCES

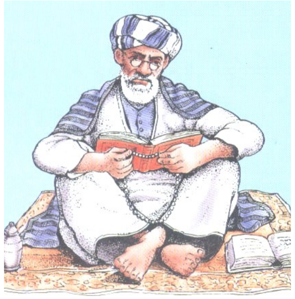
HISTORY

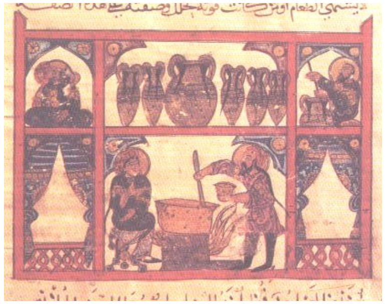
- The religion of Islam began in Arabia
- 610 AD, Muhammad from Mecca saw visions of an angel
- Message from Allah to stop worshipping false idols and to accept the will of god “Islam”
- Arabs of Mecca rejected this message

- 622 AD, the Hegira - Muhammad moved to Medina and converted the people into Islam
- Within 10 years, the framework of religion and military organization tasked with spreading the faith was established
- Medina then fought Mecca and in 630 AD destroyed all its idols and converted it to Islam

- Muhammad died in 632 AD, but his Muslim followers were ready to spread his teachings
- Concerted efforts by conquering Arabic tribes to spread Islam
- North into Central Asia
- Westward to Africa
- Along trade routes into India
- Among the Turks and Mongols

- Spread of Islam is associated with military conquest and racial movements
- Establish a cultural tie with Arabian heartland, with annual pilgrimage to Mecca





SOCIETY

- Tribal groups
- Public life was reserved for men (women had a secondary role - for domestic and agricultural work)
- Christians and Jews ("people of the book“) were given the freedom of worship and self-government

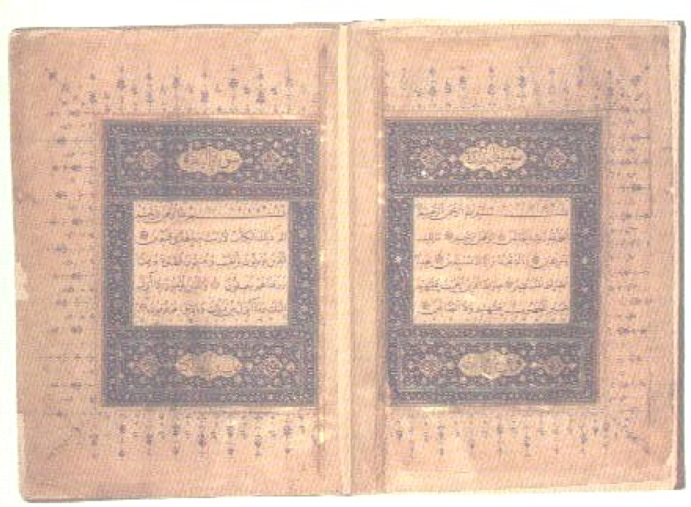
- Many of the conquered cities were already centers of learning
- Muslims translated into Arabic many scholarly writings from Greek, Persian and Indian
- Rulers and scholars were interested in mathematics, astronomy, geography, medicine, philosophy and science

Islamic

RELIGION

- Last of 3 great religions of Middle East
- Complete philosophy of life and government
- One god Allah, Muhammad is the prophet
- Faith is held to be Allah's will for creation

- Acceptance of the transitory nature of earthly life
- Personal humility
- Abhorrence of image worship



Koran

- Muhammad wrote down the words of angels who brought him messages from Allah
- After his death, these accounts were compiled into a holy book
- Speaks of the power of Allah, to accept his will and to praise him

- 5 Pillars of Islam: Declaring faith in god, Prayer, Fasting, Giving to charity, Pilgrimage to Mecca
- Also *jihad* or holy war is sometimes added as a pillar to spread the faith and defend it from attack

ARCHITECTURAL CHARACTER

DESCRIPTION

- Countries already rich in building tradition
- Product of the rapid conquest of diverse territories by a people with no architectural tradition
- Synthesis of styles under one philosophy but in many different circumstances

Islam had a profound impact on its architecture:

- No essential difference in techniques between religious and non-religious buildings
- Important architectural endeavor is normally expended on buildings having a direct social or community purpose
- Decorations tend toward the abstract, using geometric, calligraphic and plant motifs, with a preference for a uniform field of decoration rather than a focal element
- Basic conservatism discourages innovations and favors established forms
- Symmetry and balance (as in the concept of perfect creation)
- Centered upon God
- al

t

DECORATION

- in lieu of human and animal forms: abstract and geometric motifs, calligraphy, floral abstraction, geometric interlacement, mouldings and friezes, carvings in bas relief, stone inlay and mosaic, patterned brickwork, ceramic and glass mosaic

Islamic

EXAMPLES

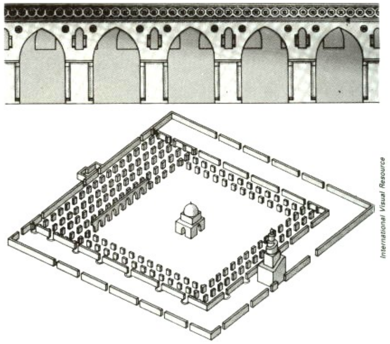
MOSQUE

- The prophet Muhammad called on people to honor Allah in prayer - mosques were built wherever Islam had spread

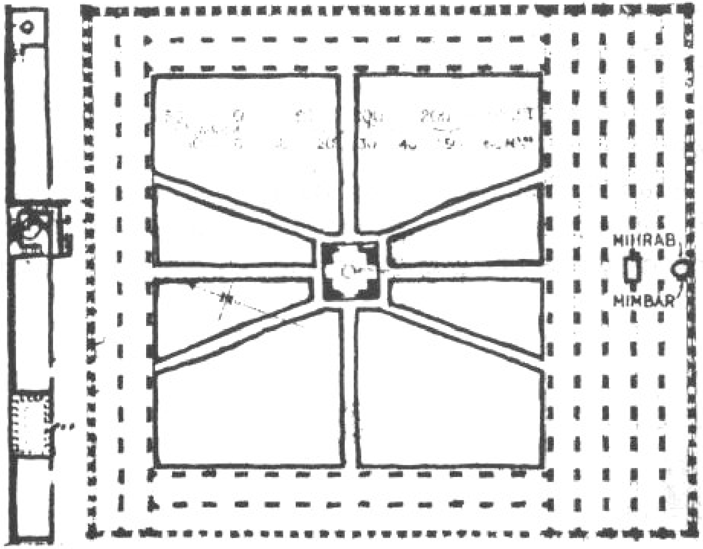
- Principal place of worship
- Building used for Friday prayer

- Prime purpose was contemplation and prayer
- Could also be used as a school, place for transactions, storage for treasures, place for hearing official notices
- Masjid - small prayer house
- Madrassah - religious college and mosque

- Inward-looking building
- Courtyard with sides punctuated with gateways, prayer chambers and porches
- No positive object of attention or adoration
- Conceived around an axis towards Mecca
- In every mosque, there is a wall with a hole or niche cut int ecca



PARTS OF A MOSQUE

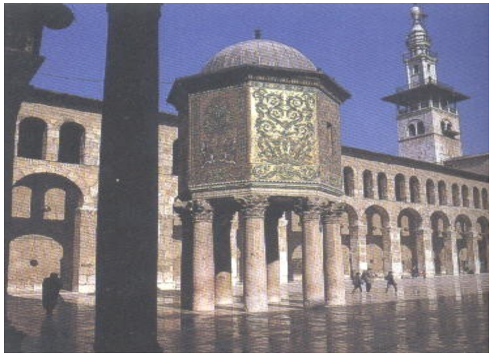


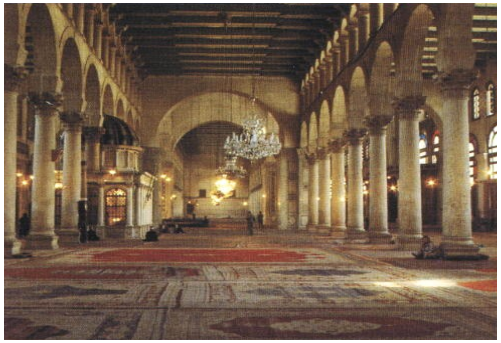
- Sahn - cloistered or arcaded courtyard is a fundamental feature
- Fawwara - fountain
- Mihrab - niche oriented towards Mecca
- Dikka - reading desk
- Maqsura - screen
- Mimbar - raised platform for ceremonial announcements
- Iwan - open-fronted porch facing a court
- Minaret - tower from which a call to prayer is made
- Kibla - axis oriented towards Mecca

Personalities:

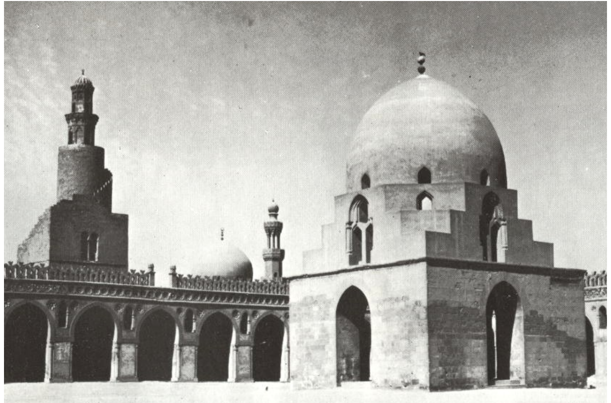
- Muezzin - caller who summons the faithful to prayer
- Imam - man who leads congregation in prayer
- Caliph - successor to the prophet as military, judicial, or spiritual leader of Islam
- Sufi - holy man

Islamic

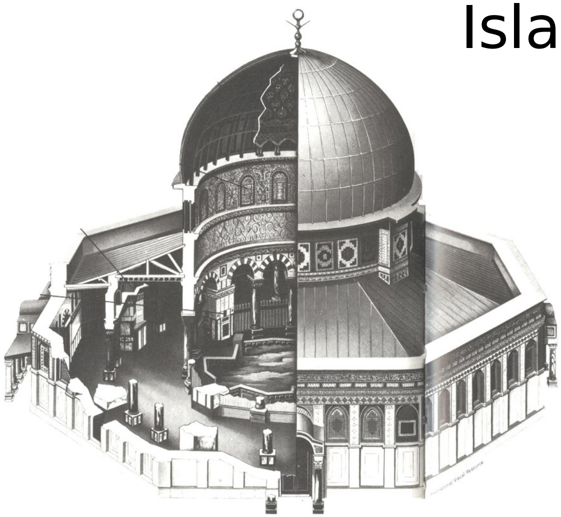




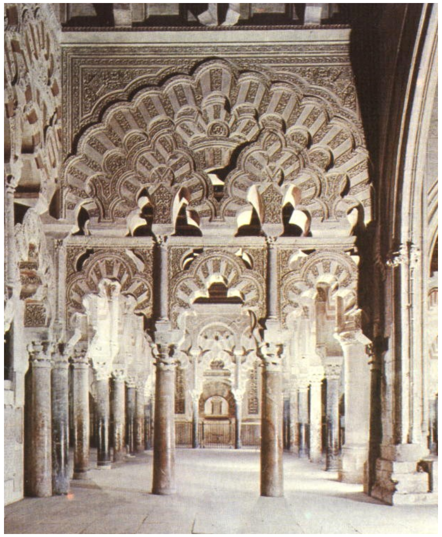
The Great Mosque, Damascus
- Earliest surviving large mosque, built in 705-711 AD
- Stood in a walled temenos



Dar al-Imara and Mosque of Ibn Tulun, Cairo
- 876 to 879 AD



Dome of the Rock, Jerusalem (Kubbet-es-Sakhra)
- 688 to 692 AD
- Most important Islamic structure
- Great central dome covers the summit of Mt. Moriah (from where the prophet is believed to have made his ride to heaven)

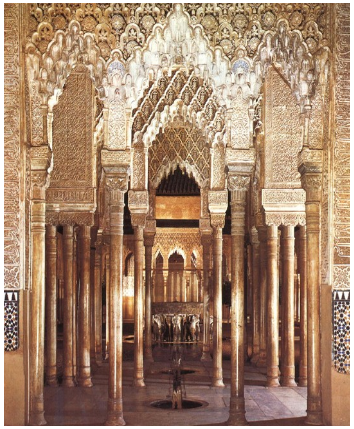


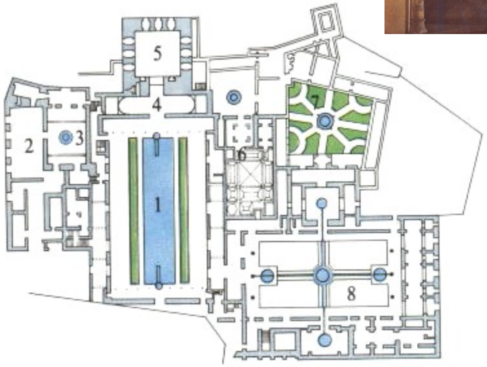
The Great Mosque, Cordoba
- 785 AD

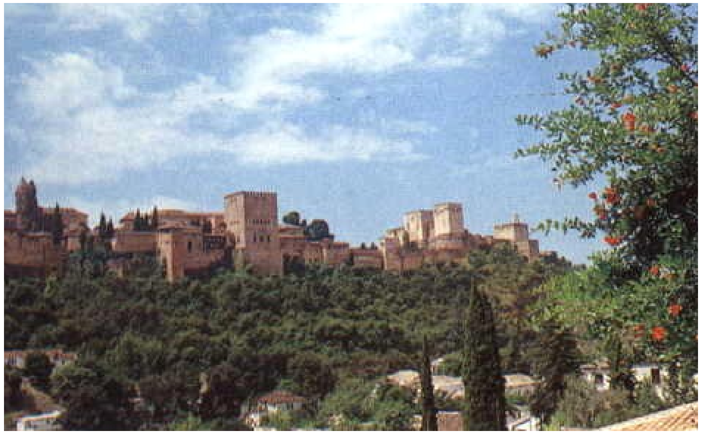
Islamic

SARAY or SERAI

- Palace with courtyard



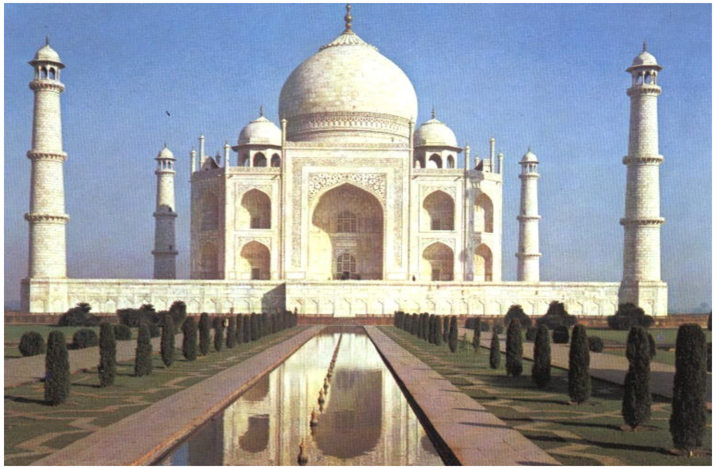




The Alhambra, Granada (1338 to 1390 AD)

- Fortified palace and complex of buildings set in gardens
- One of most elaborate and richly decorated Islamic palaces

TOMBS

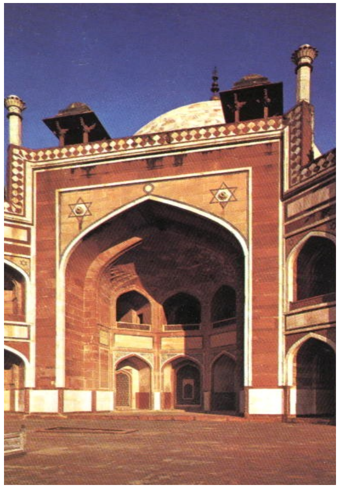


The Taj-Mahal, Agra (1630 to 1653 AD)

- Built by the emperor Shah Jahan for his favorite wife Mumtaz Mahal
- Took 11 years to build and 20,000 to work on it
- Covered in white marble, which reflects the changing colors of the sun
- Sits in a well-landscaped garden

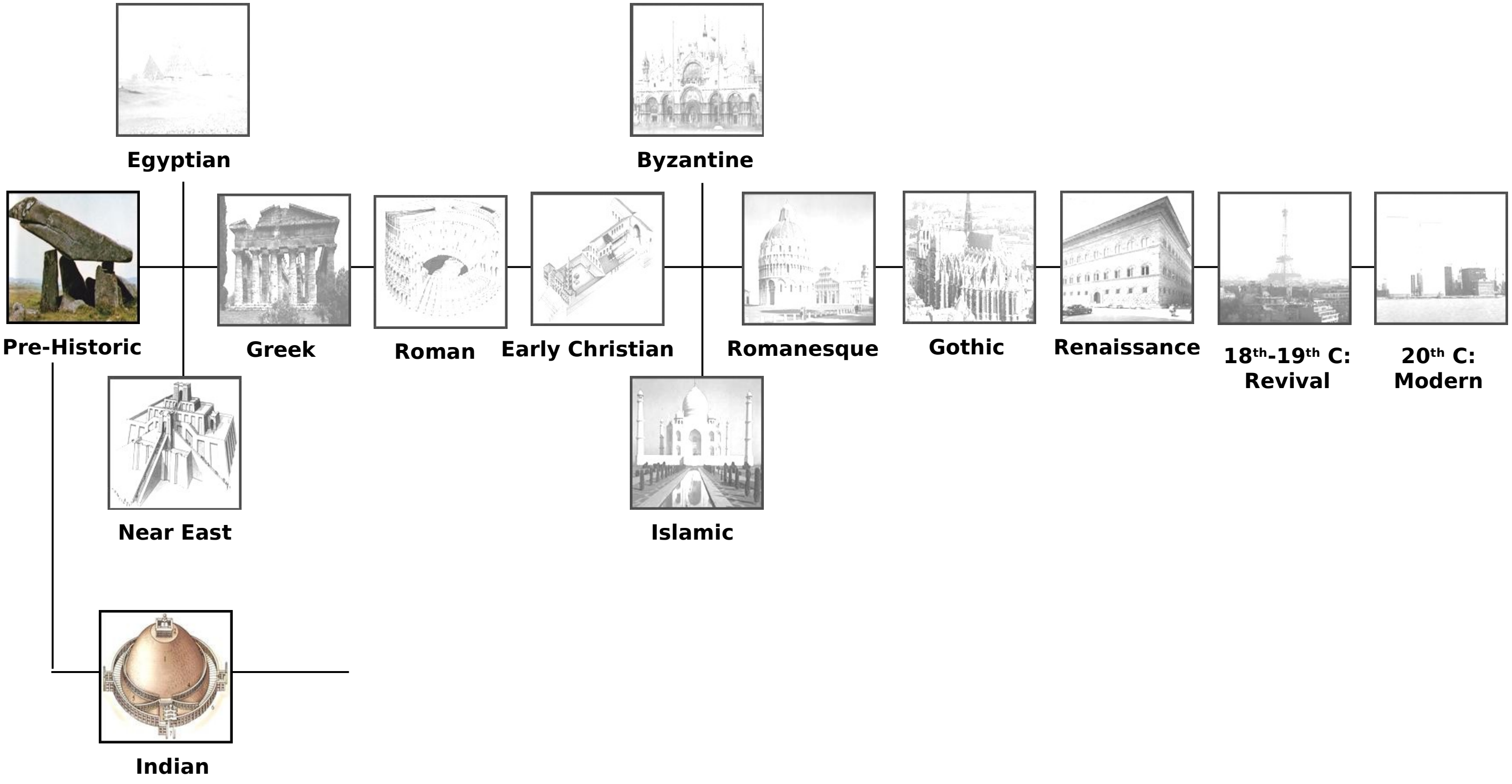
Tomb of Humayun, Delhi

- 1565 AD



Indian

The Historical Timeline of Architecture


Egyptian

Byzantine

Pre-Historic

Greek

Roman

Early Christian

Romanesque

Gothic

Renaissance

18th-19th C: Revival

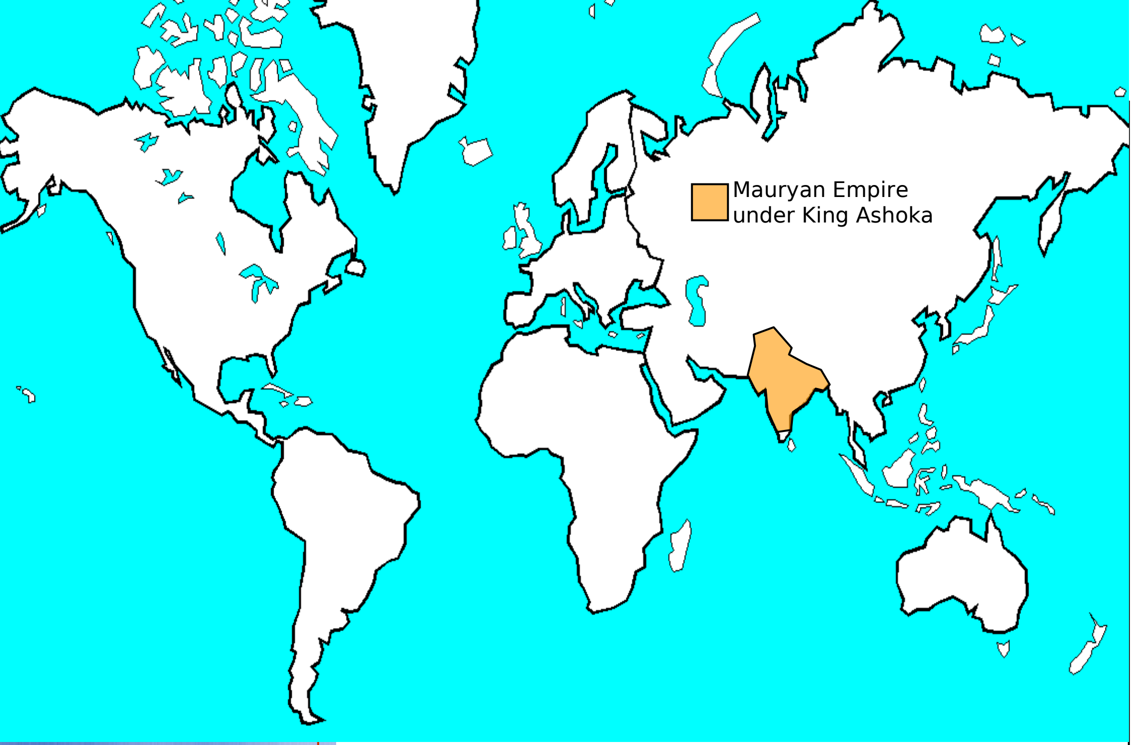
20th C: Modern

Near East

Islamic

Indian

Indian



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FILIPINO
history of architecture

INFLUENCES

HISTORY

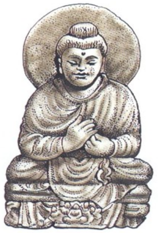
- Third great civilization to emerge in a fertile river valley
- Indus river 2500 BC, present-day Pakistan and Northwest India
- Major cities were Mohenjo-Daro and Harappa
- Each city was ruled by priest-kings, citadels atop the city
- La

- 1500 BC Aryans from the north moved into India
- Set-up 16 separate kingdoms all over
- Most powerful, the Magadha kingdom, conquered all other kingdoms
- Established the Mauryan Empire in 300 BC under King Ashoka

Links:
- Mesopotamian Cultures (from 2500 to 1500 BC)
- Central Asia (via mountain passes in the north)
- Persia and Greco-Roman Western Asia (via Baluchistan)

- Successive military and economic incursions brought art and architecture: Aryan, Persian, Greco-Roman, Sassanian, , French, English

RELIGION



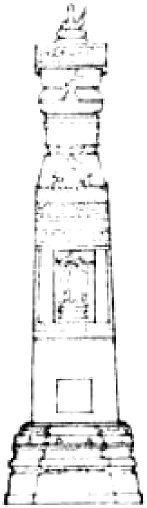
Hinduism
- Main religion of India
- Along with Judaism, the worlds oldest surviving religion
- From indigenous Dravidians and Aryan invaders
- Chief gods: Brahma, Vishnu, Shiva
- Belief in reincarnation, the soul comes back to life in a different body
- Caste system: priests, warriors and nobles, farmers and traders, laborers and servants, untouchables

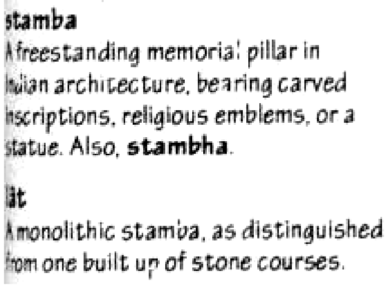
Buddhism
- Many people disliked the way Hindu society divided people into castes
- Gautama Siddhartha 563 – 483 BC, gave up his princely life to search for wisdom
- After 6 years of wandering, he found enlightenment through a deep thinking process

Indian

STAMBHAS or LATHS

- Monumental pillars standing free without any structural function
- Circular or octagonal shafts
- Capital Persepolitan in form, bell-shaped and crowned with animals carrying the Challra, wheel of law



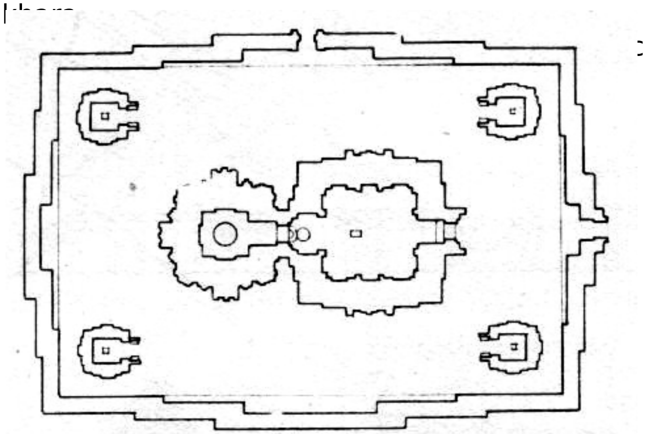


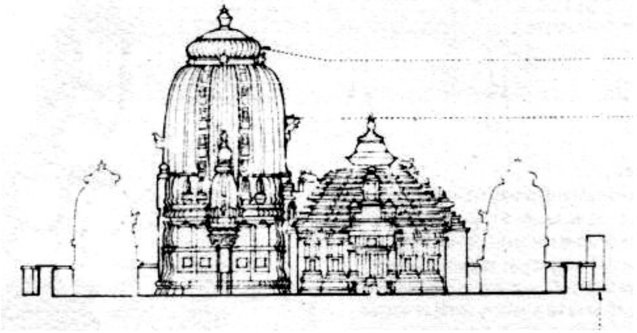
stamba
A freestanding memorial pillar in Indian architecture, bearing carved inscriptions, religious emblems, or a statue. Also, **stambha**.

lat
A monolithic stamba, as distinguished from one built up of stone courses.

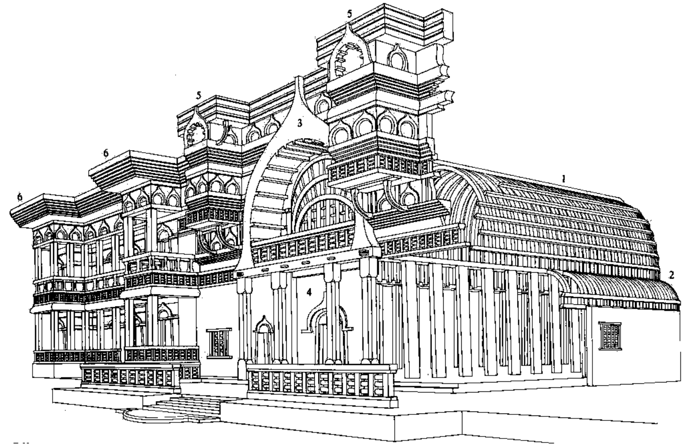
MANDIRA

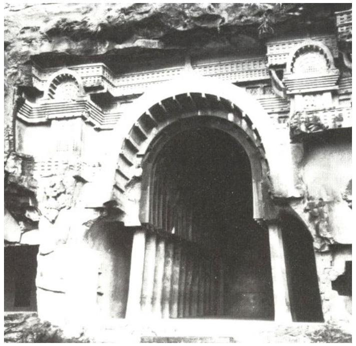
- Hindu temple with a interior sanctuary called a vimana
- Capped by a tapering spire-shaped tower – sikhara



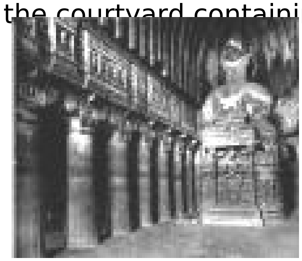


Indian





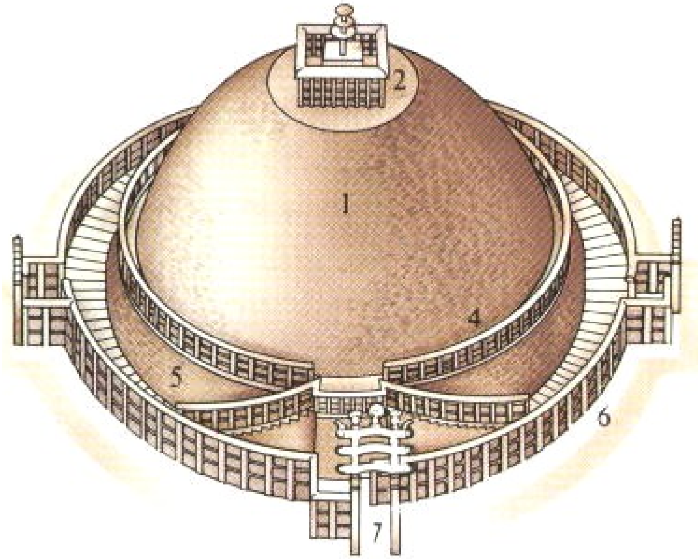
VIHARAS
- Buddhist monasteries often excavated from solid rock
- Central pillared chamber or quadrangle surrounded by verandah
- Small sleeping cells on the sides
- In front stood the courtyard containing the stupa

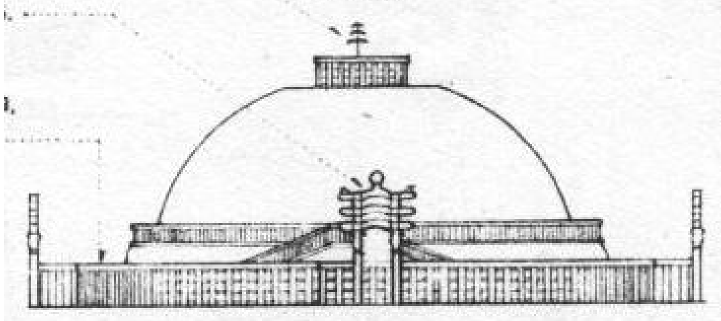


CHAITYAS
- Buddhist shrine also carved out of solid rock
- Formed like an aisled basilica with a stupa at one end

STUPAS
- Buddhist memorial mound erected to enshrine a relic of Buddha, to commemorate special events or mark a sacred spot
- Regarded as symbols of the universe
- Based on the pre-historic funerary tumulus

- Artificial domical mounds raised on a platform
- With processional paths, rails, gateways, crowning umbrella called a chattri





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Chinese

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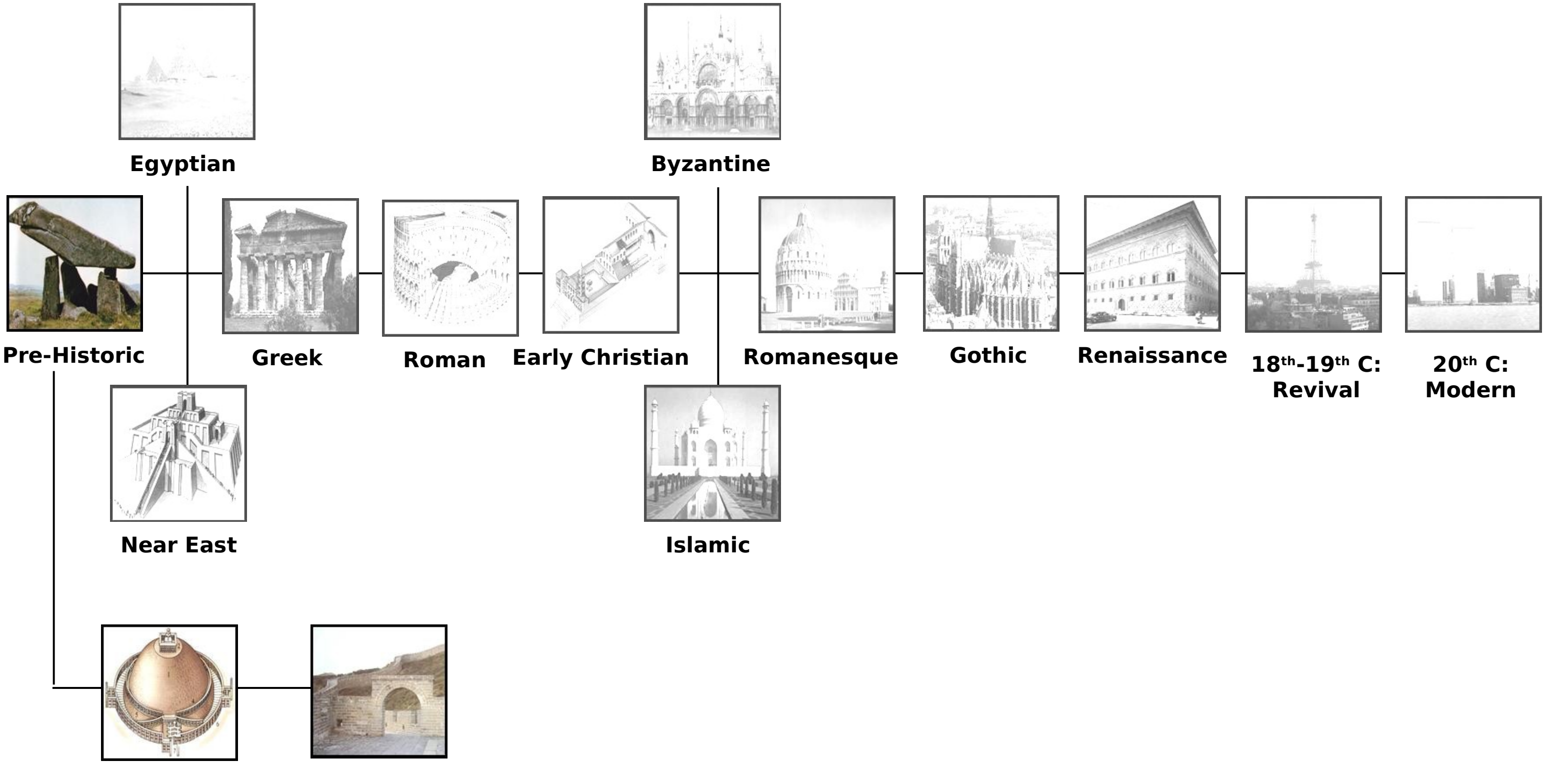

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Byzantine

Pre-Historic

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Roman

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Islamic

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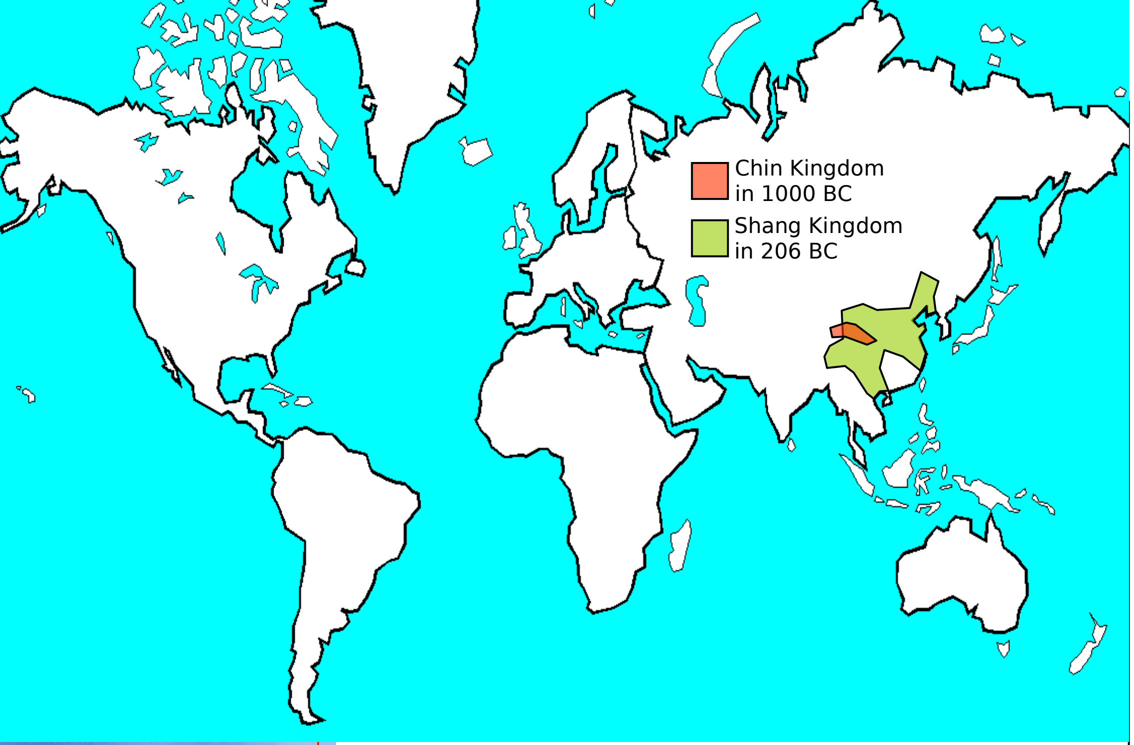
Chinese & Japanese

Chinese



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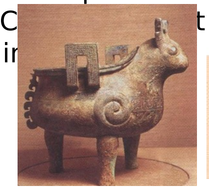
INFLUENCES

HISTORY

- Only ancient civilization that has continued to this day

- Succession of emperors and dynasties and warring states
- 1750 BC, a kingdom emerged in the middle reaches of the Yellow River in China, ruled by Shang Dynasty
- Lasted 1000 years but broke up into many

- 221 BC, Shi Huangdi of Chin took control and became the first emperor of China
- Ruled with armies and officials
- Organized huge number of laborers to work for him
- Built the Great Wall of China to repel northern enemies
- Terra-cotta army of 6000 life-size soldiers, horses and chariots was buried with the emperor
- Shi Huangdi died in 210 BC t replaced by Han and western Ji



SOCIETY

- Foreign trade by land and sea
- Theorists, schools of philosophy Confucius, Lao-Tzu
- Writing, calendar and money
- Arts, painting, calligraphy, architecture

RELIGION

Religious and ethical influences:

- Confucianism, code of social conduct and philosophy of life, family and ancestor worship
- Taoism, universal love as solution to social disorder
- Buddhism

GEOGRAPHY and GEOLOGY

- Larger than Europe in area, 1/13 of total land area of the world
- Mountainous with extensive fertile valleys, great

Chinese

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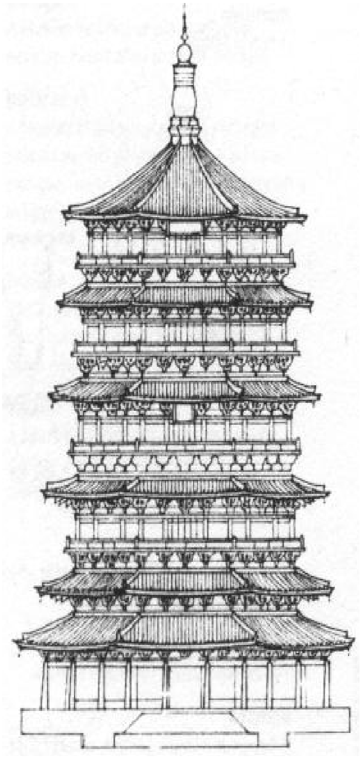
EXAMPLES

PAGODAS

- Buddhist temple, most typical Chinese building of religious significance
- Later gained a secular nature: monuments to victory or a memorial to hold relics
- Based on the Indian stupa and stambha

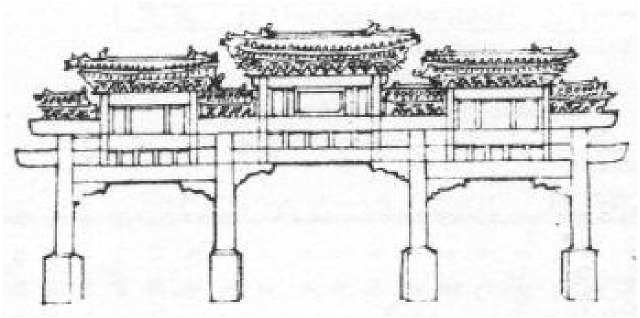
- Octagonal in plan
- Odd number of stories, 9 or 13
- Roofs projecting from each of its many floors, turned up eaves
- Slopes inwards to the top



PAI-LOUS

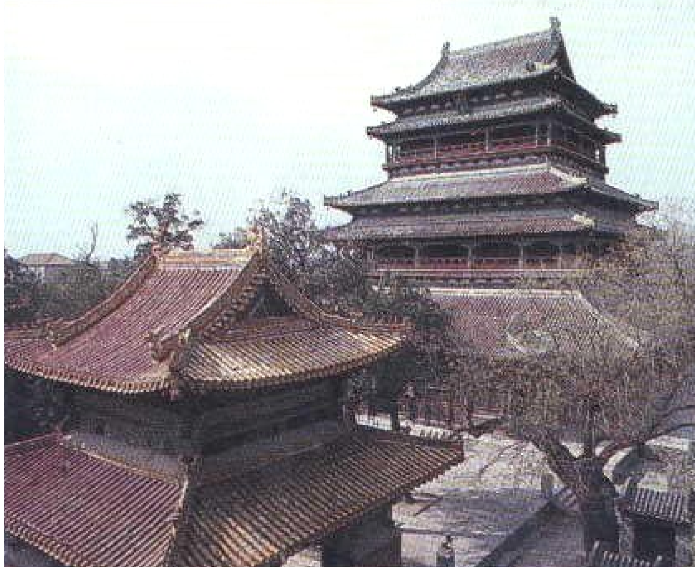
- Monumental, ceremonial gateway and basic symbolic structure in Chinese architecture
- Erected as memorials to eminent persons
- Led to temples, palaces, tombs or sacred places
- Related to the Indian torana and Japanese torii

- Trabeated form, in stone or wood
- Bold projecting roofs
- 1, 3 or 5 openings



Chinese

TEMPLES



- Chief feature was the roof
- Supported on timber uprights and independent of walls
- A sign of dignity to place roofs one over the other
- Up-tilted angles, with dragons and grotesque ornaments

- Lofty pavilions, 1 storey each
- Successive open courts and porticoes, kitchens, refectories, sleeping cells for priests

PALACES & HOUSES

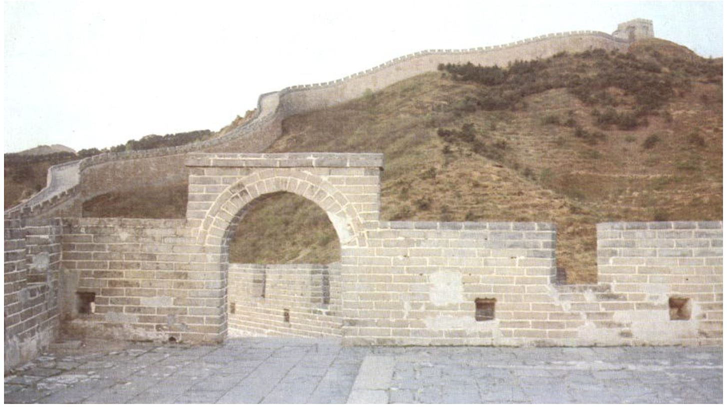
- Imperial places and official residences
- Isolated, 1-storeyed pavilions resembling temples

- Governed by building regulations limiting the dimensions and number of columns
- emperor - 9 bays
- prince - 7
- mandarin - 5
- ordinary citizen - 3

FORTIFICATIONS

The Great Wall of China

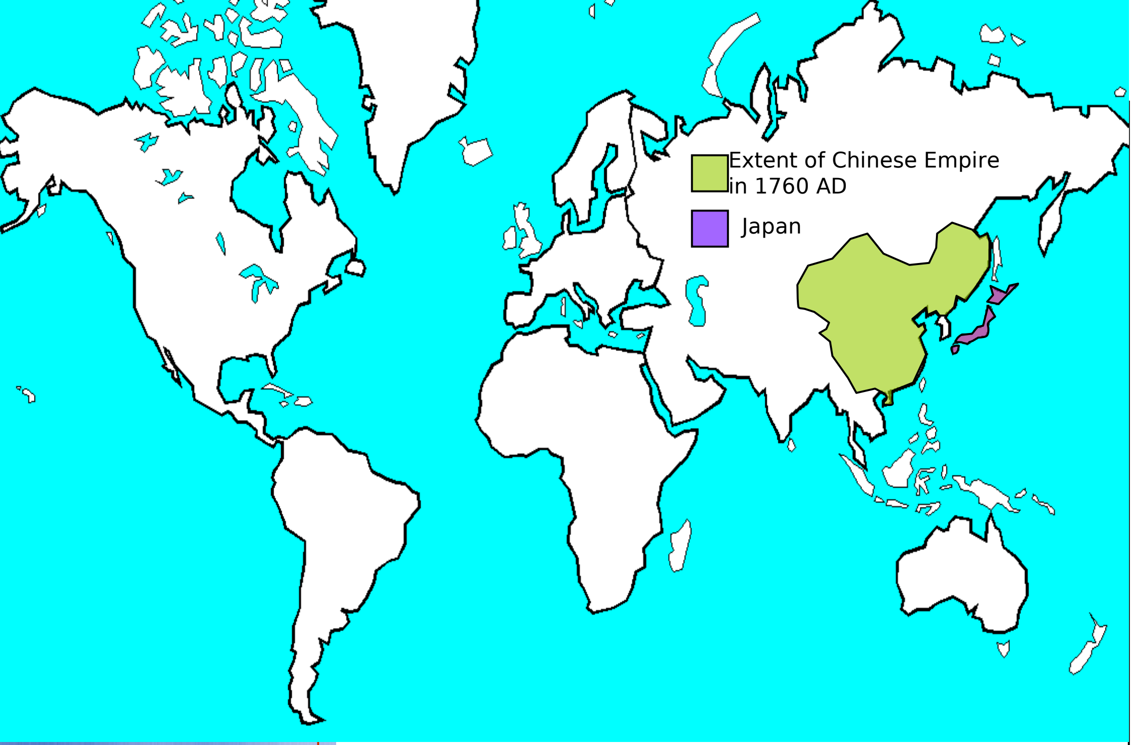
- Most famous of ancient Chinese buildings
- by Shi Huangdi



- 3700 miles long, from Pacific Ocean to Gobi Desert

- Mostly gray granite blocks, but also used whatever materials were available in the locality
- 6 to 9 m high, with 1.5 m high parapets
- Base is 7.6 m thick, 4.5 m thick at top
- Paved road wide enough for 5 horses to run abreast
- 25,000 towers, 12 m high and 700 ft apart (2 bow shots apart)

Japanese



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INFLUENCES

HISTORY

- Created in the 3rd century AD by ancestors of the present emperor
- 7th century, was divided into provinces each with a ruler
- Feudalism, with a caste system of emperor and nobles, military, people
- More powerful were the shoguns or warrior lords, each fighting with each other

- In 1603 AD, under the shogun Ieyasu Tokugawa, Japan was united and brought to peace
- The Tokugawa dynasty ruled for 250 years
- In 16th century, Portuguese traders came to trade and Christian missionaries came to convert the Japanese
- The threatened shoguns expelled foreigners, killed Christian converts, stopped trade, closed Japan to the outside world until 19th century
- Little contact with Europe, more of Chinese influence

RELIGION

- Shinto, indigenous poly-demonism
- Buddhism

GEOGRAPHY and GEOLOGY

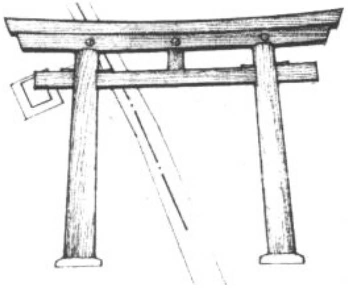
- Off the eastern coast of China, Asian mainland
- Principal island Honshu, and smaller islands at north and south
- Earthquakes & volcanoes
- Hilly and forested country
- Stone, timber, bamboo

Japanese

EXAMPLES

TEMPLES

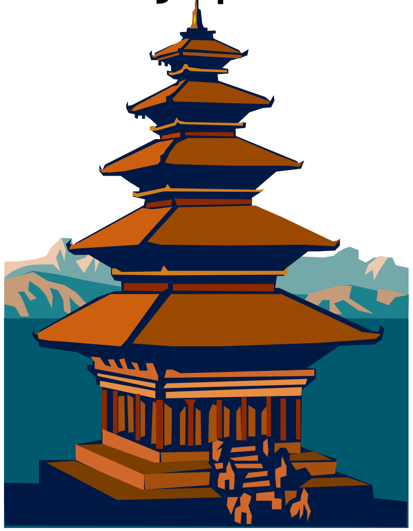
- Shinto temples and Buddhist temples



Featured the torii gateways

- Monumental, free-standing gateways to a Shinto shrine
- Derived from the Chinese pai-lou
- Two upright pillars or posts supporting 2 or more horizontal beams, usually curving upward
- Worshippers have to pass under this for prayers to be effective

PAGODAS



- Derived from the Chinese pagoda
- Square plan
- Mostly 5 storeys, 45 m in height
- Virtually suspended around a central timber (stable against earthquake shocks)
- Wide projecting roofs to each storey, subtly curved

DWELLINGS, TEA HOUSES, BATH HOUSES

- No other architecture reveals the structural and aesthetic qualities of wood
- Unpainted wood without any surface treatment

Typical 1-storey rectangular plan:

- Vestibule
- Veranda, engawa
- Living and dining
- Guest rooms
- Recess for flowers and art
- Rooms for host and hostess
- No distinction between living and sleeping apartments

- Room determined by tatami or floor coverings 1 x ½ ken (1.8 x 0.9 m)

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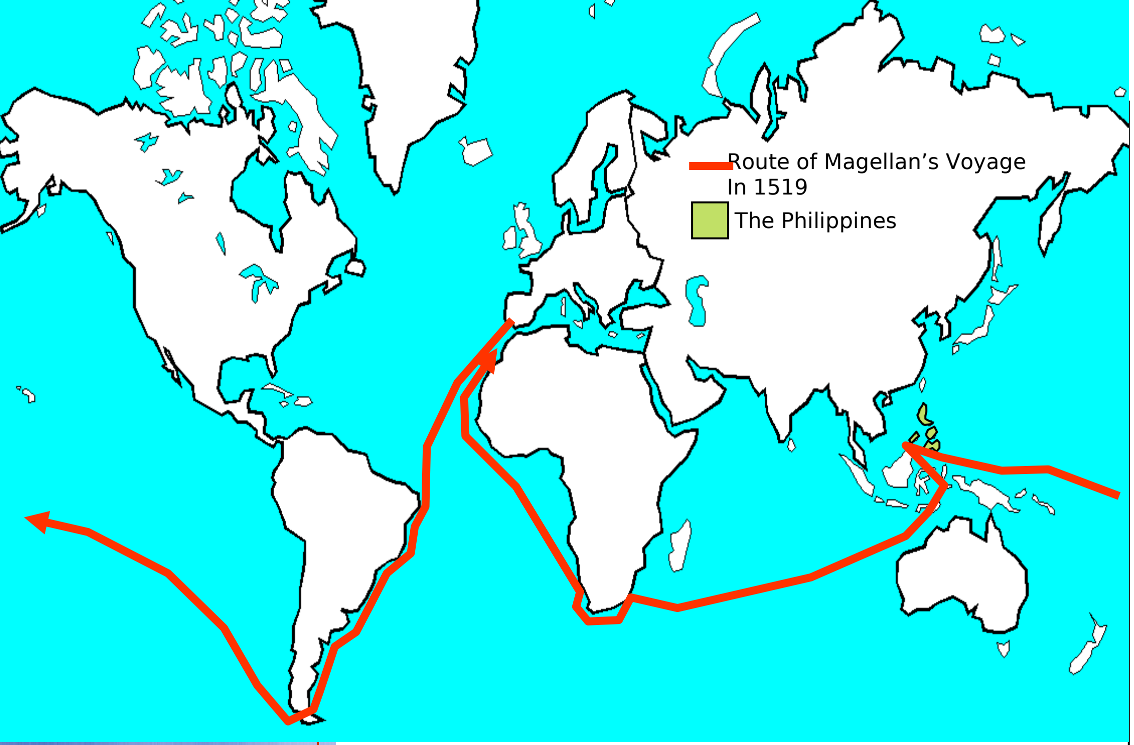

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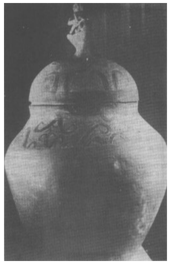
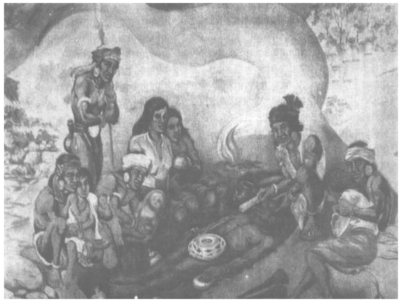
INFLUENCES



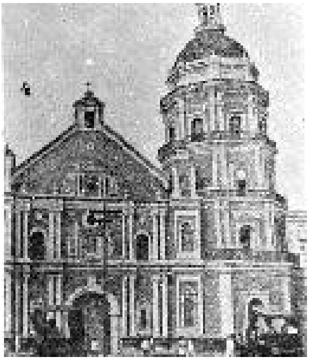
HISTORY

Pre-Colonial:

- Immigration via land-bridges as early as 250,000 years ago, and later, sea-vessels
- Immigrants of Malay origin, food gatherers and hunters
- 3000 BC, joined by advanced agricultural race from Indonesia, with barangays as tribal system
- laws on marriage, inheritance, ownership, crime, and behavior
- elaborate animistic religion



- Indians in 4th and 5th century BC
- Chinese in 3rd and 4th century AD
- Arabs - converted some parts to Islam in 1300 AD
- Trade center of the Orient – Sulu was frequented by ships from China, Cambodia, Sumatra, Java, India, Arabia

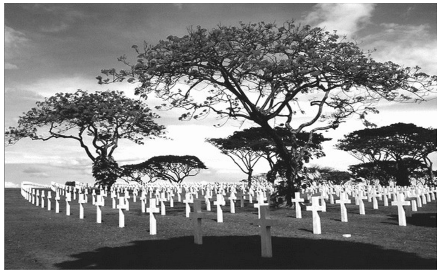


Spanish Rule:

- 1521 Ferdinand Magellan landed
- 1564 Miguel Lopez de Legazpi brought Christianity
- Systematically and efficiently Christianized most part of the country
- Introduced European institution and thought
- Economically linked Manila with Mexico and the rest of the world - via the Spanish Galleon Trade

- Brief occupation by the British forces (1762-1764); attempted seizure by Dutch and Chinese
- Spanish colony until 1900's
- Nationalist movement by Jose Rizal, unsuccessful revolt by Aguinaldo

Filipino



American Rule:
- Islands were sold or ceded to America, as a result of Spanish war with USA
- Continued fighting
- Democracy was introduced - allowed a self-government called the Commonwealth Era

Japanese Invasion:
- December 1941
- Established a puppet government
- Liberation when Gen. McArthur returned in July 1945
- Independence in 1946

- 3rd largest English-speaking country in the world
- Citadel of Christianity and democracy in East Asia
- Mixture of races: Malay, Chinese, Spanish, American

RELIGION
- Islam
- Roman Catholicism
- Protestantism, Aglipayan, Iglesia ni Kristo

GEOGRAPHY & GEOLOGY
- Archipelago of 7100 islands – mountainous and fragmented
- 3 main island groups: Luzon, Visayas and Mindanao
- Southeast Asia, Pacific Ocean - strategic position - in the path of Far East trade
- major earthquake and volcanic belt
- in the path of typhoons from the Pacific

CLIMATE
- Dry and wet season

ARCHITECTURAL CHARACTER

DESCRIPTION

Building Capability:
- Even with ties to nearby countries, our ancestors saw no need for large megalithic structures, etc
- Nevertheless showed engineering capability and prowess with the Rice Terraces of Northern Luzon

Settlements
- big villages along key trade centers
- near the sea-shore, beside rivers and streams – for purposes of travel, communication and sanitation

Filipino Architecture:
- shaped by the climate, terrain, vegetation, and fauna around it
- two elements in making a house: 1) tradition or following the generally accepted form and structural patterns; and 2) chance or "playing it by ear", allowing minor modifications for the builder and his family

- Tropical architecture
- Light
- Open and transparent

history of architecture
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BYZANTINE
ROMANESQUE
GOTHIC
RENAISSANCE
18TH-19TH C REVIVAL
20TH C MODERN
ISLAMIC
INDIAN
CHINESE & JAPANESE
FILIPINO

Filipino

EXAMPLES

CAVE DWELLINGS
- earliest human habitation
- Tabon Cave, Palawan had been inhabited for 30,000 years
- caves in Angono, Rizal with ancient petroglyphs

TREE HOUSES
- perched on forked branches of trees, up to 60 feet above the ground
- prevented attack by animals and human enemies
- by the Gaddang and Kalinga of Luzon
- Manobo and Mandaya of Mindanao
- Moros of Lake Lanao

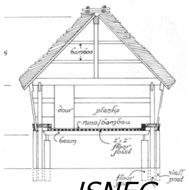
LEAN-TOS
- winbreaks or windscreens as the first attempt at building
- served as shelters during a hunting or food-gathering journey
- made of light branches and fronds, but strong enough to withstand a strom
- Negritos of Zambales
- Agtas of Palanan, Isabela

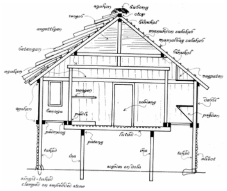
BAHAY KUBO or NIPA HUT
- “*balai*” and spanish “*cubo*” or cube – cube-shaped house, from its boxy appearance
- primitive style of dwelling probably started around 200 BC, with the coming of iron tools
- well- adapted to tropical climate
- of wood, rattan, cane, bamboo, palm leaves, cogon and nipa

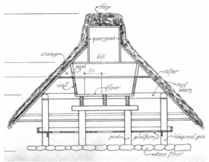
Elevated one to five feet from the ground - *silong*
- protection from the moist ground and flood
- protection from vermin and other animals
- enclosed area as sleeping quarters
- *silong* used for storage for tools and crops, an animal enclosures, or burial ground

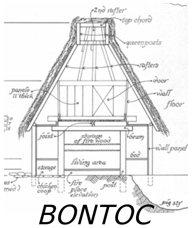
- usually with steep thatch roof
- varies across regional and ethnic lines

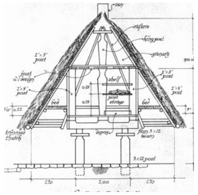
Cordillera Region


ISNEG

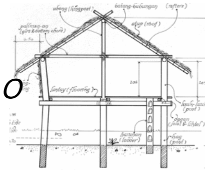

KALINGA

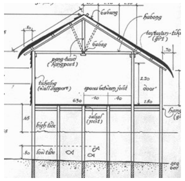

KANKANAI

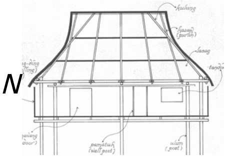

BONTOC

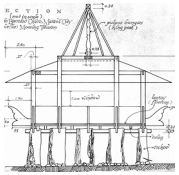

IFUGAO

Mindanao & Sulu Region


BADJAO


SAMAL


YAKAN


MARANAO

Panay Region

Other Regions Ivatan, Mangyan, Subanun, Mandaya

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Filipino

SPANISH HOUSES: BAHAY-NA-BATO

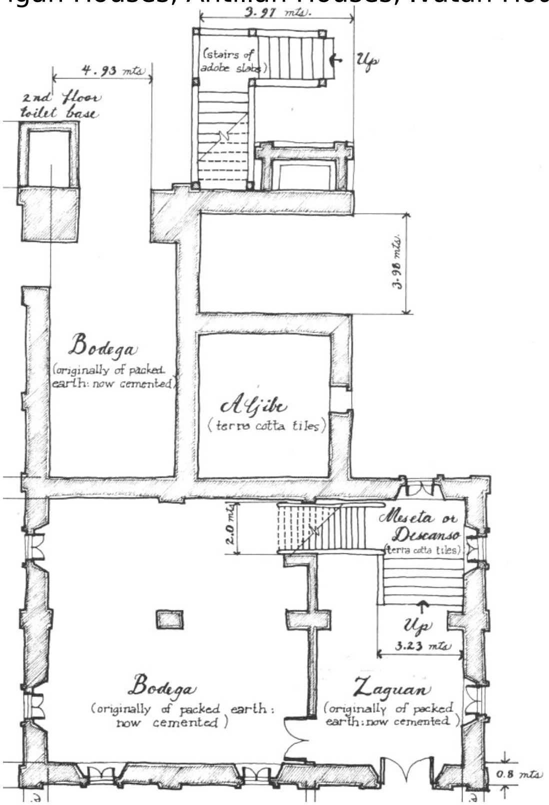
Evolved from the Bahay Kubo: a tropical house
- Steep, hip roof
- Post and lintel construction
- Elevated living quarters
- Economy of materials
- Space flowing from one room to next
- Light and airy structure

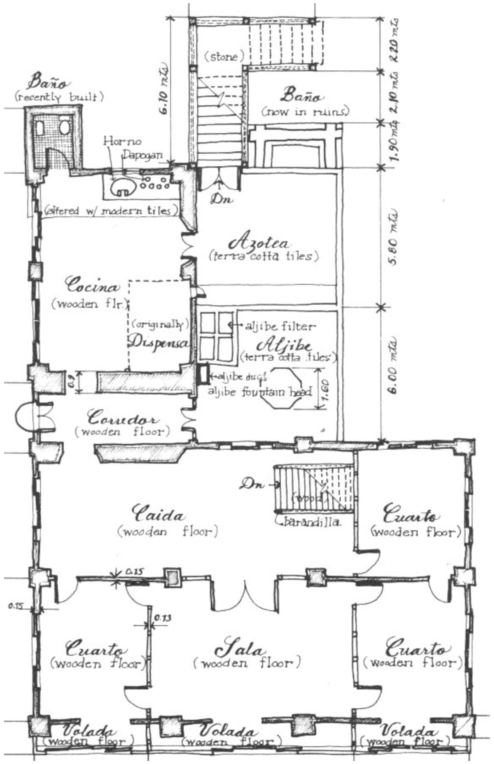
Spanish, Neo-Classical, Gothic, and Baroque influence:
- grandeur and solidity
- Ornamentation

Vigan Houses, Antillan Houses, Ivatan Houses

FIRST FLOOR:
- Zaguan, for caroza
- Quadra, horse stable
- Bodega, storeroom

SECOND FLOOR:
- Stairway
- Caida, ante-sala from stairs
- Sala, living room
- Comedor, dining room
- Cocina, kitchen
- Dispensa, pantry
- Letrina or Comun, toilet
- Baño, bath
- Azotea, open terrace
- Aljibe, water cistern
- Cuarto, Alcoba, Dormitorio
- Entresuelo, vault
- Balcon, balcony
- Patio, courtyard


3.97 mts.
(stairs of adobe slabs)
Up
4.93 mts
2nd floor toilet base
3.98 mts
Bodega
(originally of packed earth: now cemented)
Aljibe
(terra cotta tiles)
2.0 mts
Meseta or Descanso
(terra cotta tiles)
Up
3.23 mts
Bodega
(originally of packed earth: now cemented)
Zaguan
(originally of packed earth: now cemented)
0.8 mts


Baño
(recently built)
(stone)
6.10 mts
Baño
(now in ruins)
2.20 mts
2.10 mts
1.90 mts
Horno
Dapogan
Dn
(altered w/ modern tiles)
Azotea
(terra cotta tiles)
5.80 mts
Cocina
(wooden flr.)
(originally)
Dispensa
aljibe filter
Aljibe
(terra cotta tiles)
aljibe duct
aljibe fountain head
6.00 mts
1.60
0.9
Corredor
(wooden floor)
Dn
(wood)
barandilla
Caida
(wooden floor)
Cuarto
(wooden floor)
0.15
0.15
0.13
Cuarto
(wooden floor)
Sala
(wooden floor)
Cuarto
(wooden floor)
Volada
(wooden floor)
Volada
(wooden floor)
Volada
(wooden floor)

Filipino

SPANISH CHURCHES

Calasiao, Pangasinan
- 2nd best bell tower
- by Fr. Ramon Dalinao

Laoag Church, Ilocos Norte
- by Fr. Joseph Ruiz
- sinking belltower

Las Pinas Church
- by Fr. Diego Cera

Loboc, Bohol
- biggest number of murals on walls and ceilings

Manila Cathedral
- by Bishop Domingo Salazar

Miagao Church, Ilo-ilo
- by Fr. Fernando Comporedondo

Morong Church, Rizal
- exquisite Spanish Baroque style
- by Fr. Blas dela Madre

Panay Church
- largest bell, from 30 sacks of coins donated by townspeople

Quiapo Church
- restored by Juan Nakpil and Jose Maria Zaragosa

San Agustin Church
- by Fr. Juan Macias

San Sebastian
- one of first steel buildings
- steel from Belgium by Eiffel

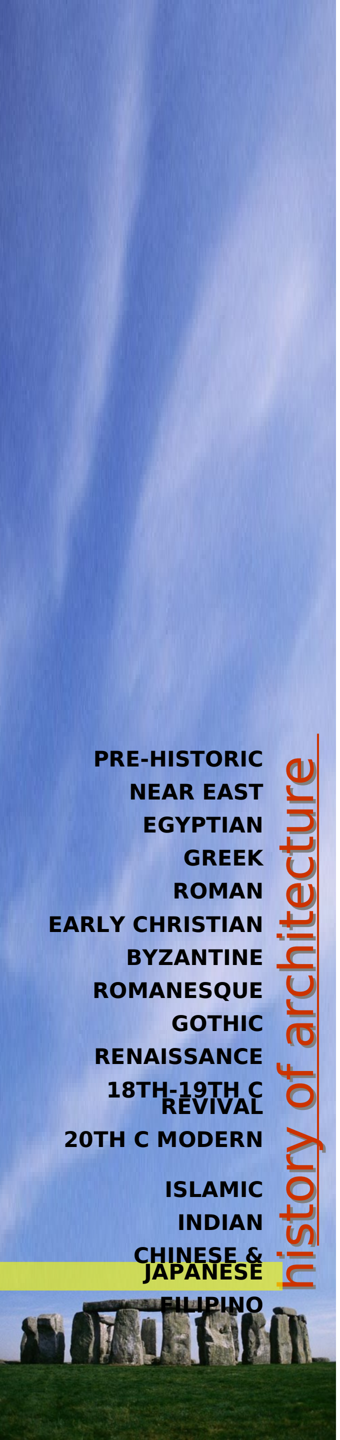
Taal Church, Batangas
- by Fr. Martin Aguirre
- biggest church

Sta. Ana Church, Manila
- by Fr. Vicente Ingles
- restored by Juan Nakpil

Sto. Domingo Church, QC
- by Jose Maria Zaragosa

Sto. Nino, Cebu
- by Diego de Herrera

UNESCO WORLD HERITAGE LIST
- *San Agustin, Intramuros*
- *Miagao Church, Ilo-ilo*
- *San Agustin, Paoay, Ilocos Norte*
- *Sta. Monica, Ilocos Sur*



Filipino

ARCHITECTURAL HISTORY IN THE PHILIPPINES

SCHOOLS

Escuela Practica Y Profecional de Artes Oficio de Manila
- 1890
- taught maestros de obras

Liceo de Manila
- MO-P “Maestros de Obra-Practica”
- MO-A “Maestros de Obra-Academia”

Escuela de Ingenieria Y Arquitectura
- Closed after one year

Mapua Institute of Architecture (1925)
- 1st school of Architecture

Adamson University
- 2nd school of architecture

UST College of Architecture (1930)
- 3rd school of architecture

ORGANIZATIONS
- Philippine Architects Society
- Philippine Institute of Architects
- League of Philippine Architects
- Association of Phil. Government Architects
- In 1975, PIA + LPA + APGA = United Architects of the Philippines

Filipino

EARLY AMERICAN PERIOD

Daniel Burnham - city plan of Manila and Baguio
William Parsons
Juan Arellano
Tomas Mapua - 1st registered architect in country
Alejandro Legardo
Antonio Toledo
Carlos Barredo

Masonic Temple, Escolta
- 1st concrete building in Escolta

Philippine Normal School
- Phil. Normal University

University of the Philippines
- Padre Faura

National Museum
- 1st was the Legislative Building

Intendencia Building
- adjacent to Manila Cathedral

Luneta Hotel
- 2nd hotel in Asia
- French Baroque style

Army and Navy Club
- rest and recreation for American soldiers

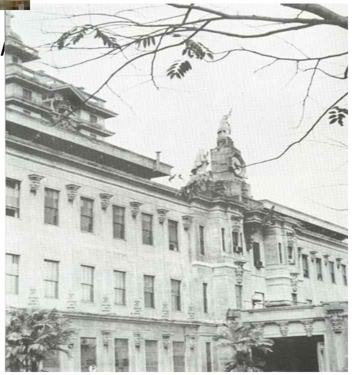
De La Salle College
- by Tomas Mapua

Rizal Monument
- obelisk

Sta. Isabel College

Manila Hotel
- 1st hotel in Asia, 1st with elevator
- Originally by William Parsons, renovated by Locsin in 1975

Philippine General Hospital
- by William Parsons



UST Main Building
- by Roque Rueno

Post Office Building
- by Juan Arellano

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Filipino

COMMONWEALTH PERIOD

Juan Nakpil - 1st National Artist for Arch.
Pablo Antonio - 2nd National Artist for Arch.
Enrique Bautista
Gonzalo Barreto
Fernando Ocampo
Andres Luna y San Pedro
Leandro Locsin - 3rd National Artist for Arch.

Agriculture & Finance Building

Crystal Arcade, Escolta

Quezon Institute
- By Juan Nakpil

Lyric Theater, Escolta
- By Juan Nakpil

Ideal Theater, Avenida Rizal
- by Pablo Antonio

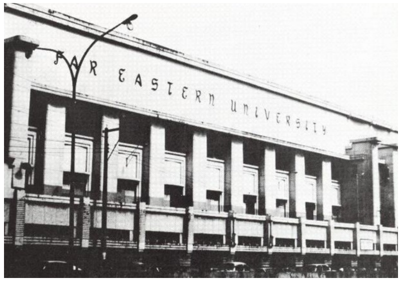
Jai Alai Building - demolished in 2001
- Art Deco, streamline style

Ambassador Hotel
- by Fernando Ocampo, 1st skyscraper (4 storeys)

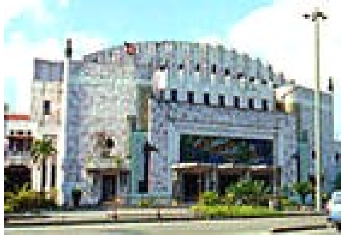
Syquia Apartments, Malate
- by Pablo Antonio

Natividad Building, Escolta
- by Andres Luna y San Pedro

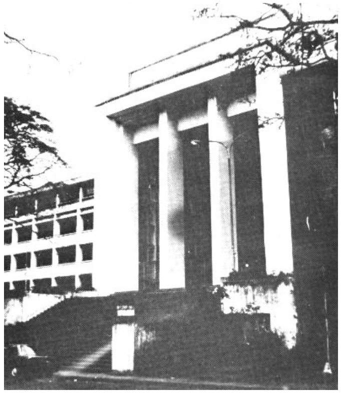
Regina Building, Escolta
- by Andres Luna y San Pedro



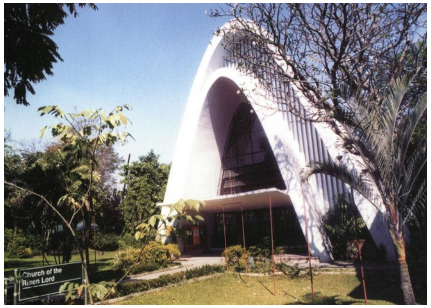
FEU Main Building
- by Pablo Antonio



Metropolitan Theater
- by Juan Arellano

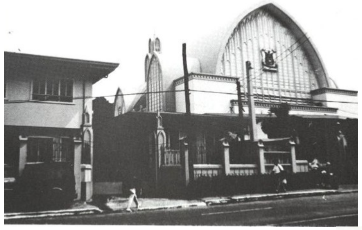


College of Engineering and Liberal Arts, UP Diliman
- by Cesar Concio

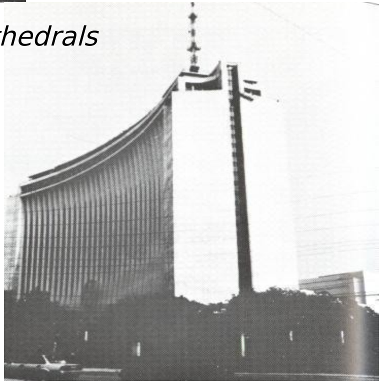


The Church of the Risen Lord, UP by Cesar Concio

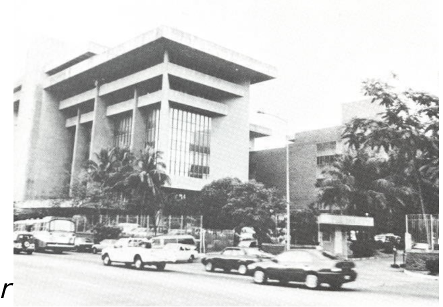
Filipino



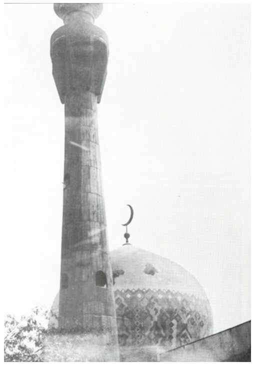
The Iglesia Ni Cristo Cathedrals
- by Carlos Santos Viola



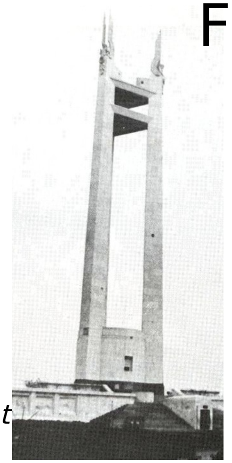
The Meralco Building
- by Jose Zaragoza



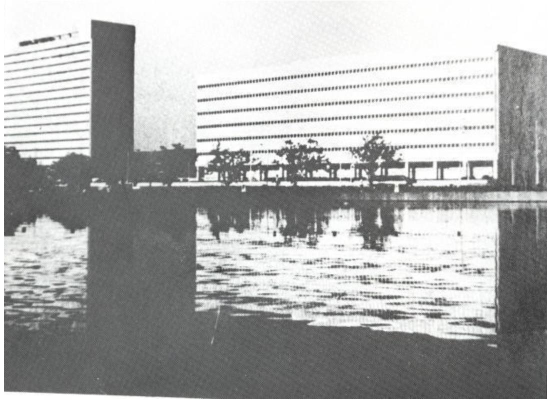
Philippine Heart Center
- by Jorge Ramos



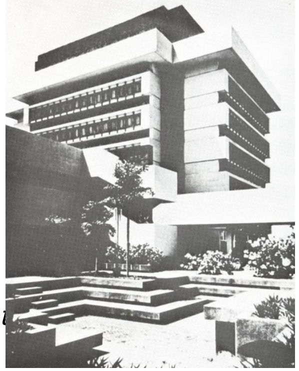
The Quiapo Mosque
- by Jorge Ramos



The Quezon Monument
- by Federico Ilustre



The Central Bank of the Philippines
- by Gabriel Formoso



Asian Institute of Management
- by Gabriel Formoso

history of architecture
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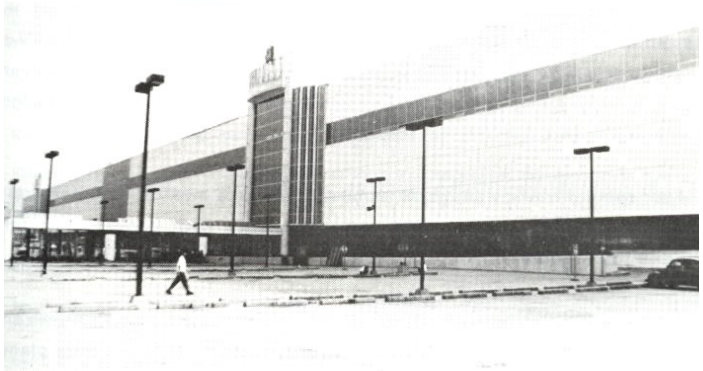
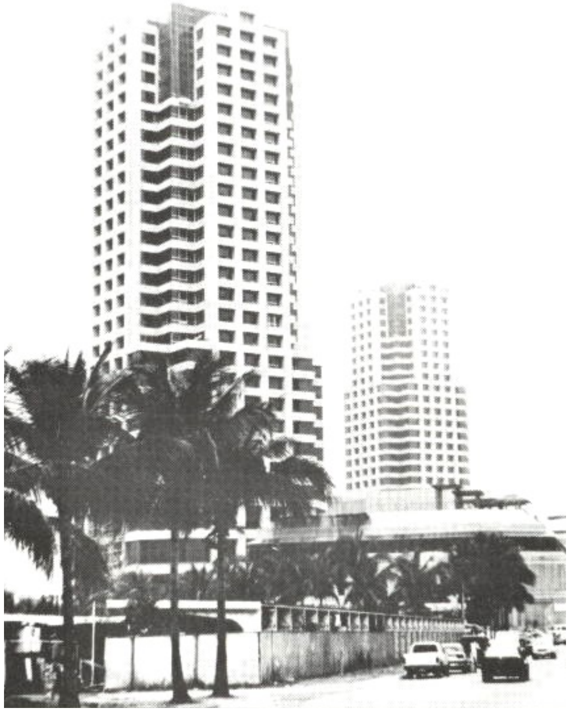
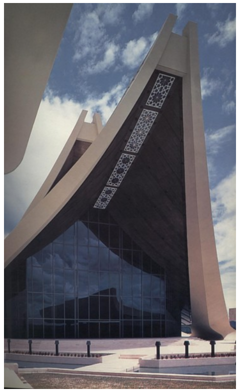


SM Megamall
- by Antonio Sindiong

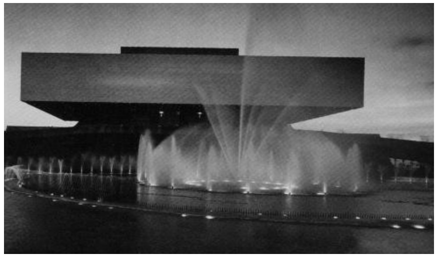


Robinson's Galleria
- by William Coscolluela

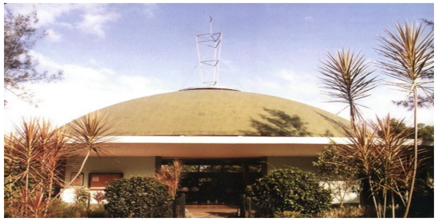
by Leandro Locsin:



The New Istana, Brunei

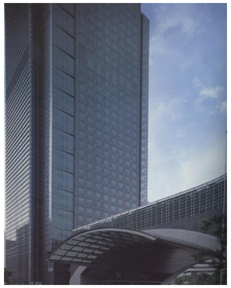


The Cultural Center of the Philippines



The Parish of the Holy Sacrifice, UP Diliman

The Philippine Stock Exchange



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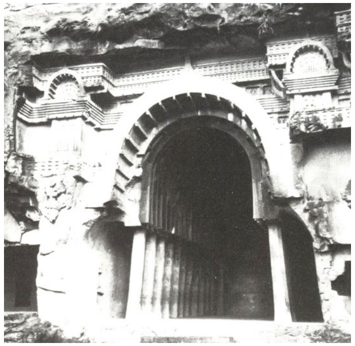
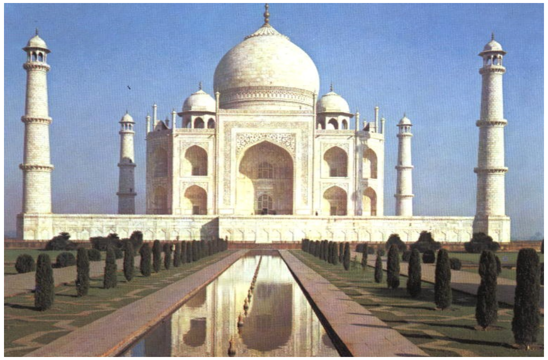
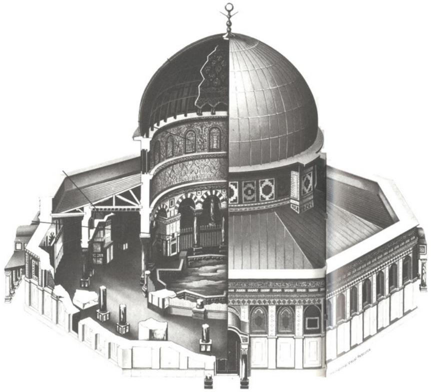
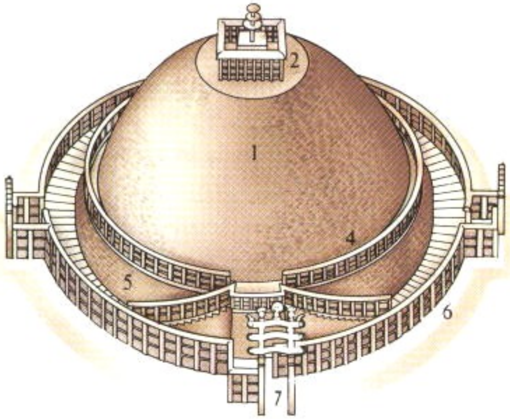
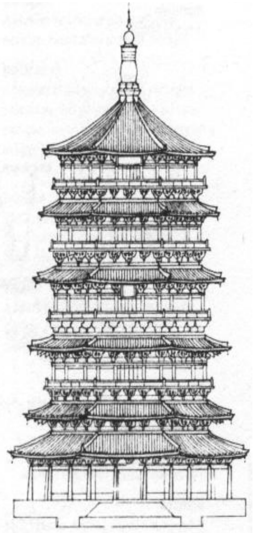
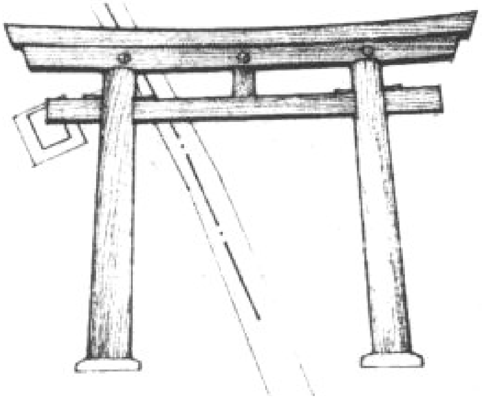




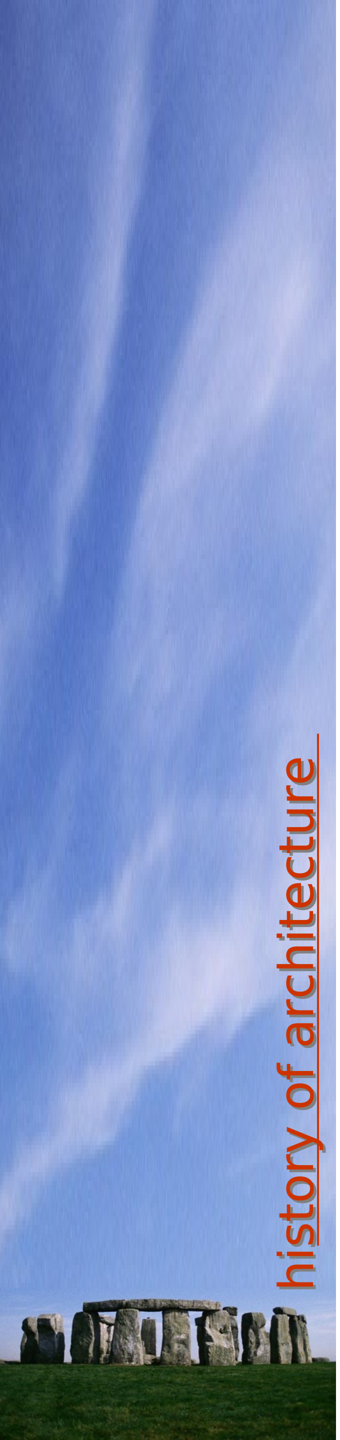


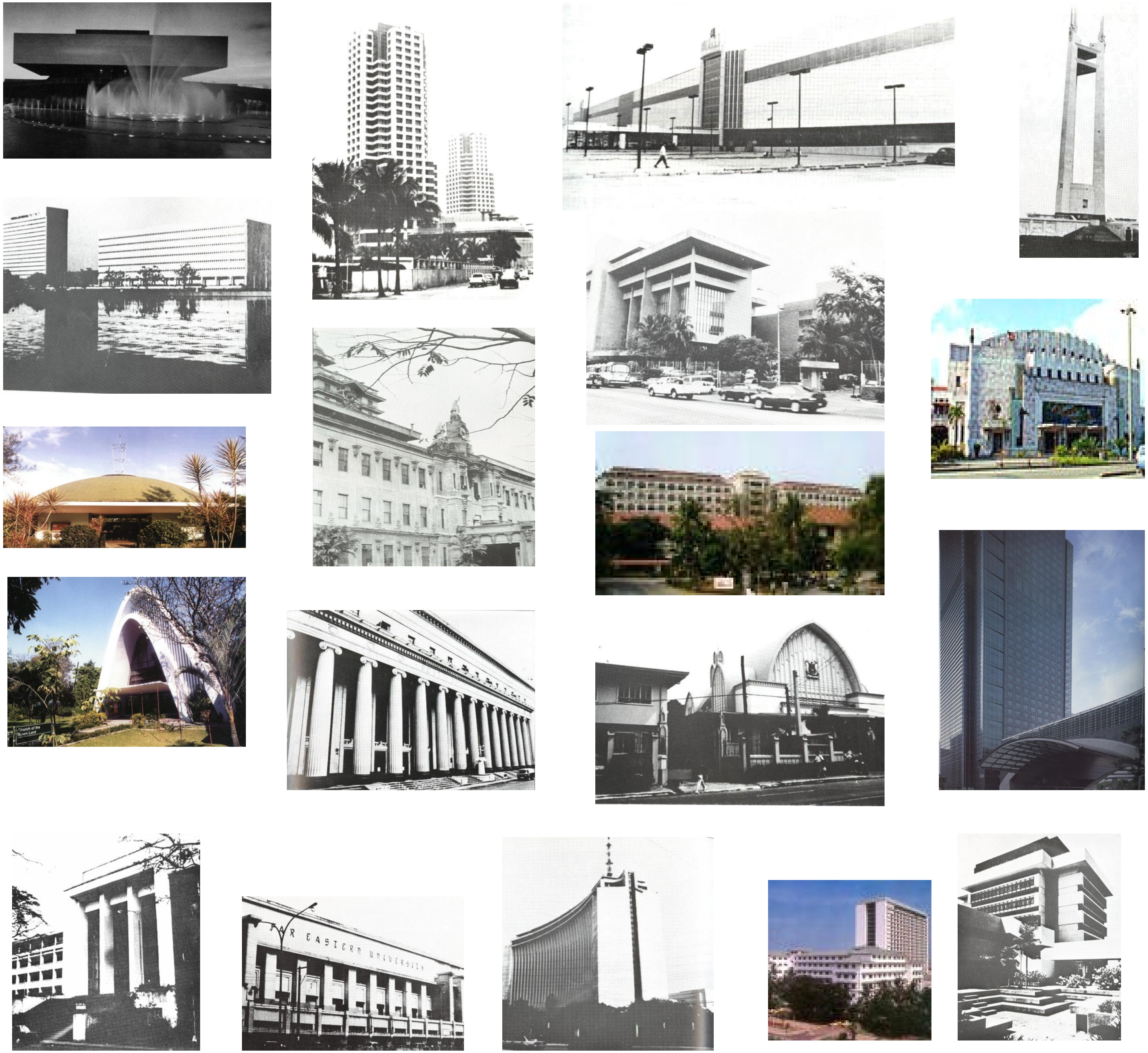


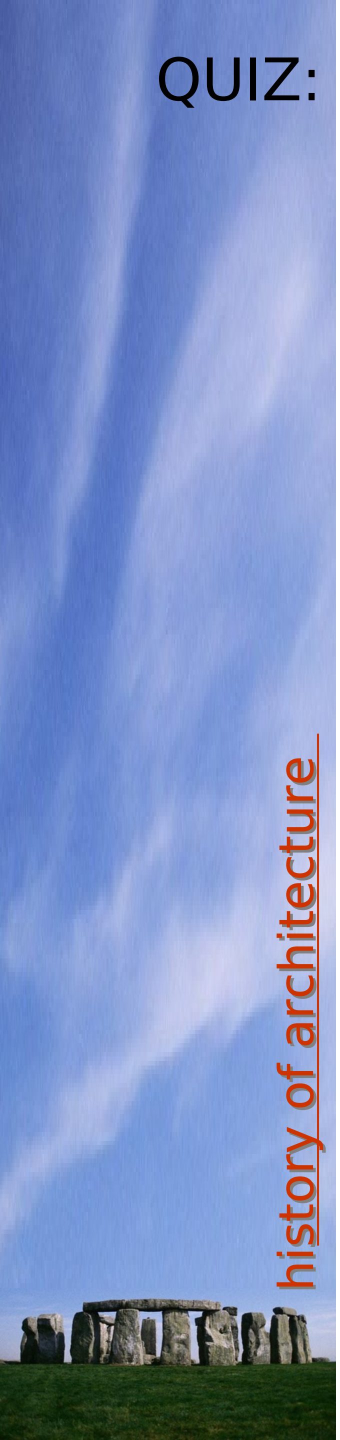




history of architecture




Church of the Risen Lord
FAR EASTERN UNIVERSITY



QUIZ:

Types of Vaults
1.
2.
3.
4.

5 Orders of Architecture
1.
2.
3.
4.
5.

Egypt Methods of Natural Lighting
1.
2.
3.

Gateways
1. Egyptian –
2. Greek –
3. Indian –
4. Chinese –
5. Japanese –

Pyramid vs. Ziggurat
1.

2.

3.

Hellenic vs Hellenistic

Famous Building Groups
1.
2.
3.
4.

Campanile vs Belfry

Types of Domes
1.
2.
3.

Periods of Renaissance
1.
2.
3.
4.

12 Architects of St. Peter's
1.
2.
3.
4.
5.
6.
7.
8.
9.
10.
11.
12.

Architects of Stuart Period, Britain
1st Phase -
2nd Phase -

Biggest Churches
1.
2.
3.
4.
5.

Chinese vs Japanese Pagodas
1.

2.

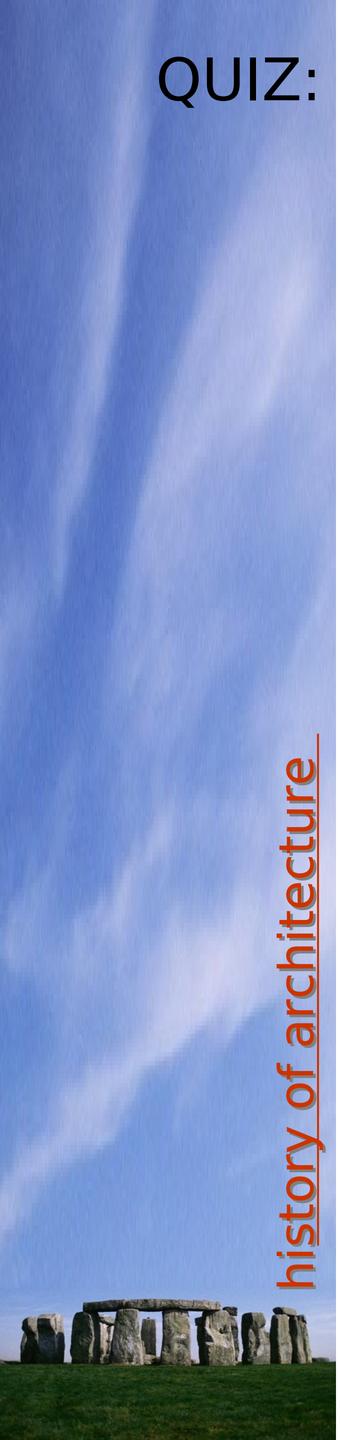
Types of Crosses
1.
2.

Types of roofs
1.
2.
3.
4.
5.
6.
7.

5 Points of New Architecture
1.

2.
3.
4.
5.

Art Noveau Styles
1. France –
2. Germany –
3. Austria –
4. Italy –
5. Spain -



QUIZ:

Types of Vaults
1. Wagon/ Barrel/ Tunnel Vault
2. Wagon with Intersecting Vault
3. Cross Vault
4. Hemispherical Dome/ Cupola

5 Orders of Architecture
1. Doric
2. Ionic
3. Corinthian
4. Tuscan
5. Composite

Egypt Methods of Natural Lighting
1. Clerestory
2. Skylight
3. Temple door

Gateways
1. Egyptian - Pylon
2. Greek - Propylaeum
3. Indian - Torana
4. Chinese - Pai-lou
5. Japanese – Torii

Pyramid vs. Ziggurat
1. Pyramids have sloping faces; ziggurats have diminishing faces
2. Pyramids used stone as building material, ziggurats used mud-bricks
3. Pyramids have sides facing the cardinal points, ziggurats have corners facing the cardinal points

Hellenic vs Hellenistic
Hellenic - religious architecture
Hellenistic - civic architecture

Famous Building Groups
1. Pyramids at Giza
2. The Acropolis, Athens
3. Pisa Cathedral
4. St. Peter’s, Rome

Campanile vs Belfry
Belfry - attached to church
Campanile - detached from church

Types of Domes
1. Simple
2. Compound
3. Melon, Serrated, Onion or Bulbous shape

Periods of Renaissance
1. Early Renaissance
2. High Renaissance
3. Baroque
4. Rococo

12 Architects of St. Peter’s
1. Donato Bramante
2. Giuliano da Sangallo
3. Fra Giocondo
4. Raphael
5. Baldassare Peruzzi
6. Antonio da Sangallo
7. Michelangelo
8. Giacomo della Porta
9. Domenico Fontana
10. Vignola
11. Carlo Maderna
12. Bernini

Architects of Stuart Period, Britain
1st Phase - Inigo Jones
2nd Phase - Christopher Wren

Biggest Churches
1. St. Peter’s, Rome
2. Seville Cathedral
3. Milan Cathedral
4. Cologne Cathedral
5. St. Paul’s, London

Chinese vs Japanese Pagodas
1. Chinese - octagonal plan, Japanese - square
2. Chinese - 9 or 13 storeys, Japanese - 5 storeys

Types of Crosses
1. Latin cross
2. Greek cross

Types of roofs
1. Gable
2. Hip
3. Hipped gable
4. Mansart
5. Gambrel
6. Butterfly
7. Rainbow

5 Points of New Architecture
1. Framework structurally independent of walls
2. Free-standing façade
3. Roof garden
4. Open planning
5. Cube form elevated on stilts or columns

Art Noveau Styles
1. France – Le Modern Style
2. Germany – Jugendstil
3. Austria – Sezessione
4. Italy – Stile Liberty
5. Spain - Modernismo